VOCAL REINFORCEMENT

A PRACTICAL STUDY

MYER

173 vowels

25 8 degrees Power of tones

P 84 breath control

Vocal Reinforcement

A PRACTICAL STUDY OF THE REINFORCEMENT OF THE MOTIVE POWER OR BREATHING MUSCLES; OF THE RESISTING FORCE OR RESISTANCE IN SINGING; OF TONE COLOR; OF CORRECT THOUGHT; OF THE RESONANCE CAVITIES; OF ENUNCIATION; OF THE WILL OR WILL-POWER; OF THE EMOTIONS OR FEELING; OF EXPRESSION, ETC.

BY EDMUND J. MYER

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"The Renaissance of the Vocal Art," "Position and Action in Singing," "Truths of Importance to Vocalists," "Voice Training Exercises" (A Study of the Natural Movements of the Voice), "The Voice from a Practical Standpoint," Etc., Etc.

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PREFACE.

This work is the outgrowth of a state or condition of certain things which are of interest and importance to others as well as to myself. I have had many inquiries, personal and by letter, with regard to certain things which appeared in my previous publications, "Truths of Importance to Vocalists," and "The Voice from a Practical Standpoint;" also with regard to other interesting and important questions in the science of voice culture. Many of these, in a certain sense and in a certain way, I have answered in this work. As my previous publications have been of benefit to many as well as to myself, for the sake of all interested, and in the interest of truth and science, I publish this work. I feel also that in justice to myself I should more clearly state my own position, by giving more fully and definitely certain truths of special interest and importance. Besides this, it will be found that certain other truths or principles of vast importance have been set forth in this work; principles which have, as a rule, received but little attention at the hands of teacher or writer. This, it will be found, has been done, not only theoretically but also in a practical way. In almost all

systems of voice development, voice control, voice use, there has been and is a weak spot, a missing link. This missing link has been supplied by the theory of Resistance and its practical application as set forth in this work. Much has been said upon the subject of the control of the air current above the organ of sound, or the disassociation of muscular from vocal effort; yet, to my knowledge, no theory, definite or practical, has ever heretofore been given upon this important point. The principles for the equalization of the vowel sounds based upon resistance and breath control above the organ of sound, have been given here for the first time in a practical way. I have endeavored, as has been my custom, to write in a plain, practical way, avoiding as far as possible technical terms.

New York, 1891. EDMUND J. MYER.

INTRODUCTORY.

The study and mastery of all science and of all art is based upon theory and practice; this is especially so with regard to the science of voice and the art of song. This work, for the sake of form and clearness, has been divided into two general divisions or parts; the theoretical and the practical. It is impossible to entirely separate the two in writing, nor is it desirable to try to do so; therefore much that is practical is written in the first part in order to give clearness and force to the principles and rules set forth. In the second part, the practical, a few simple movements or studies are given for the purpose of applying the theory advanced and the principles laid down in Part First.

The first part has again been divided into three divisions or chapters, representing the three principal stages of study, through which every student of the divine art must pass, in order to reach the desired goal — the position of a great artist: first, mechanical, or the physical development; second, intellectual, or the mental process; third, æsthetic, or the study and development of expression and feeling or emotion. These three stages of study when properly presented

are practically interwoven. Thus that which at first is necessarily mechanical, under the influence of the mental process soon takes on an intellectual tint or color, becomes the result of thought, and finally all is lost in the æsthetic, in the development of feeling and expression.

More or less consideration has been given to subjects or points which have already been largely written upon. They have, however, been presented in a new way or form. These points have been given in order to prepare the reader and student for, and to lead up to, the main or leading principles or thoughts of this book, namely : resistance; the control of the air current above the organ of sound; the disassociation of muscular from vocal effort; the equalization of the vowel sounds; tone color; reinforcement; correct thought ; will power, etc.

Right tone production is the result of breath imprisoned, compressed and controlled in exit, and not of breath in escape. In order to properly control the breath in singing, resistance must be understood and mastered, as well as pressure. In order to develop true resistance, the right location and direction of effort of all the strong muscles of the body, the muscles of the motive power and resisting force, must be understood and mastered. When the right location and direction of effort of all parts are understood and applied, then true resistance will prevail.

Upon true resistance, the weak point, the missing link in many systems of study, depends almost all else. The control of the air current above the organ of sound depends upon right resistance, as well as the disassociation of muscular from vocal effort; a most important subject for our consideration. Without true resistance the equalization of the vowel sounds is impossible. Reinforcement depends not only upon pressure, but resistance as well; upon the balancing of these forces.

A right training of the voice may be said to be a study of reinforcement. Reinforcement does not mean simply increased breath pressure, increased power or increased noise; it means something infinitely more. It means bringing into action and putting in the voice, in the right way, all the powers which Nature has bestowed upon the singer — the powers of body, mind and soul. Thus we have the reinforcement of the vibration of the bones and muscles of the body; the reinforcement of the air in the cavities of the chest; the reinforcement of the inflation of all the resonance cavities; the reinforcement of tone color, of the mind or will, the will power, and of feeling or emotion.

As much of the good derived my from book, "The Voice from a Practical Standpoint," was due to its practical nature, I was impressed with the importance of giving a practical bearing to this book,

not only in Part Second, but throughout the entire work.

There has also been given a short article on the speaking voice, as the principles which develop and control the singing and speaking voice are virtually the same.

It will be found that certain things, certain important points, have been repeated — have been given in connection with two or more articles, sometimes in the same words, sometimes slightly different. This has been done because experience has taught me that many important points are impressed upon the mind by constant repetition only and because certain articles are so closely allied that it is impossible to give them full force and effect without more or less repetition. In fact, throughout the entire work it will be found that, with a few exceptions, the strength and force of any one article largely depends upon an understanding and appreciation of all others.

Part First

THEORETICAL

CHAPTER I.

MECHANICAL.

ARTICLE I.

Effort.

NO MAN succeeds in any walk in life without effort, unless he be a genius, and even then he must apply his God-given powers. There is effort which is purely muscular, there is effort of the mind, of the will, of the soul. There is effort which means strength, health, life. There is effort which means weakness, disease, death. No man can succeed in the art of song without the effort of his entire body, mind and soul.

Effort in singing does not mean undue effort, it means that which develops. It is sometimes said, "He sings without effort." The strong man cannot lift a weight without effort, and yet he does it so gracefully that the effort is not apparent, is not felt by the observer. So with the real artist, all physical effort is so placed upon the

strong muscles that singing is apparently as easy as talking ; no undue effort or contortion of the singer forces itself unpleasantly upon the notice of the hearer. Of course, this refers to the artist who has mastered all mechanical movements, who has made them, as it were, a part of himself, a part of his voice; who has made them automatic, so that in song he is unconscious of the application of his own strength. Let it not be supposed that any one can sing with magnificent power, beauty and dramatic force without effort. On the other hand, the entire body, mind and soul are in action, and yet to the singer, and to the listener, all effort is lost sight of in the graceful, natural manner in which it is done, and in the magnificent result.

To reach this point one must master all mechanical movements, must make them a part of oneself: must so train and strengthen the muscles which produce voice that, in time, that which was difficult becomes easy, because automatic. The strong man who walks briskly does not think of the action or effort of his limbs which carry him, but of the point he is trying to reach in a given time. So with the artist, all action or effort is lost in the result. To sing well one must have strength and health. If you have neither, I know of no better way to get them than by a course

of vocal training under a good master, in connection with physical culture. All singers should take sufficient physical training to develop the muscles upon which the strength of the voice largely depends; it will always add much to the voice and to the ultimate chance of success. The best voices, as a rule, come from the country and the country towns. They are found where people live an active outdoor life, breathing pure air and developing health, strength, and vital force. This should be a lesson to the city pupil, who does nothing to develop strength and chest power.

There is right effort, there is wrong effort: there is effort that is active, and effort that is passive. Every singer, well trained, knows that the latter is the most difficult to master. There is a right location of effort, and a wrong location of effort. There is a right direction of effort and a wrong direction of effort. This, of course, means right or wrong application of effort to producing and sustaining voice. There is an effort which controls the motive or driving power of the voice, and an effort which controls the resisting force. The former is well known, the latter is but little understood, and yet it is the more important of the two, for upon its control and application depend almost all true conditions of voice. The motive power, or pressure, is easily acquired; the

resistance is much more difficult to understand and master, and requires much careful thought and study.

ARTICLE 2.

Location of Effort.

It must be borne in mind that the theory of re-inforcement as here set forth, and the principles of study and teaching are based upon "deep breathing." There are, however, so many different opinions as to what deep breathing really is, so far as it concerns the correct use of the voice, that the following articles on "Location of Effort," "Direction of Effort," "Motive Power," "Resistance," etc., may, it is to be hoped, help to clear up the question in the minds of many who are tempest tossed in the storms of conflicting opinions. It is not necessary here to notice the different theories with regard to "deep breathing." Many of them the majority of readers are no doubt already familiar with. If the articles on Location and Direction of Effort, and Motive Power, be read and understood, the reader will no doubt be better prepared to understand and appreciate the all-important subjects of "Resistance," and "Resonance." That the important subject of Resistance, which has been scarcely

touched upon, is but little understood or appreciated, witness the fact that as a rule public singers and speakers do not properly control or economize the breath. While the inspiration may be right, the chances are that the expiration will be wrong: and yet the question of correct voice use is almost entirely one of expiration.

As there is wrong effort and right effort, so there is wrong location of effort and right location of effort. The location of effort at one point will greatly free, strengthen and develop the voice; at another point it will interfere, weaken, and perhaps destroy the voice. Hence the importance of correct location. As this part of the work is devoted to the mechanical movements, those points of location only over which we have correct direct control, will be considered. Of course, we shall be compelled to notice points of effort which are wrong, but they will be treated negatively, and more fully considered further on.

All mechanical or muscular effort in singing or speaking should be placed upon the strong muscles of the body, nature's driving and controlling force in the use of the voice. There should be no direct local effort above the chest muscles or above the collar bone.

All movement or effort above the chest must be controlled indirectly, by a proper management

of the strong muscles of the body; must be the result of the study of effect or of correct thought.

There can be no correct direct control of any part of the voice above the chest. All correct effort and action above the chest must be the result of will power; of the influence of the mind, of correct thought (the mental effect), of feeling, working through nature's own perfect method of form, action and control.

If the reader will bear this point in mind, he will be the better able, as we proceed, to appreciate the influence of the mind or will-power in the training and use of the voice.

All driving and controlling force must be placed upon the strong muscles of the body, over which we have correct direct control. Locate all effort upon the diaphragm, the abdominal muscles, the muscles of the sides and back, the chest muscles; in fact the entire body must assist in the support and control of the voice. So train these strong muscles of the body that their action or effort will finally become automatic. So train them that in the course of time they become, as it were, a part of the voice itself; that their action or effort will then be the result of will power; that they will then drive and control the voice not by undue force or effort, but by position and condition, by correct natural position.

Never, by direct local effort, control the action or position of tongue, lips, cheeks or jaw, in the formation and production of any vowel sound or word, or in the use of the voice in singing or speaking. No effort or contortion of the face is ever right, except for dramatic effect. The face must be left entirely free to give expression to sentiment, feeling, etc. As this position is so directly in opposition to the usual idea of vowel form and voice control it is to be hoped that the reader will reserve his opinion or condemnation of this important point until he more fully investigates it further on.

Never in the use of the voice attempt by direct local effort to control the form, position or action of the strong interfering muscles of the pharynx, the pillars of the fauces, the soft palate or the larynx. Any local effort to form or control above the chest is unnatural and therefore wrong. All must be the result of correct thought. That direct local effort above the chest is common, witness the many pinched, hard, unmusical, unnatural voices.

ARTICLE 3.

Direction of Effort.

IT IS not the intention here to write a theory of breathing or to give a set of rules or exercises

for the study of breathing. For the reader who may want or need such rules or exercises, we would respectfully advise the study of "Artistic Respiration," "Deep Breathing," as set forth in "The Voice from a Practical Standpoint," by the author of this work. Of course, a consideration of "The right direction of effort," largely refers to the management and control of the breathing muscles.

Many fully understand inspiration but not expiration. They study breath-taking, develop the capacity of the lungs, strengthen and develop certain breathing muscles, yet, their study being one-sided, they fail to learn how to apply what they have gained to producing and sustaining tone. They understand deep breathing, but not "Applied deep breathing," which is after all the gist of the whole study. Applied deep breathing means the control, not only of the motive power, but of resistance as well; it means that perfect balancing of the forces whereby true conditions of tone are secured, whereby the harmonic beauties of the voice and the natural powers of the singer are developed and artistic tone is the result. The correct natural action of the larnyx, that automatic action which gives it correct adjustment, setting and firmness, depends entirely upon the management of the breathing mus-

cles, upon securing that perfect balancing of the forces which I have termed "A condition of equal pressure and resistance"; which condition is the result of properly applied deep breathing.

The object here in this article is to consider the muscular action only, and not the direction or action of the air current, the control of which, after all, is the foundation of all true singing, and which will receive due attention when considered in a practical way. We can fully appreciate these movements, only when studied in connection with correct breathing and singing; inspiration and expiration in connection with tone-production.

The direction of effort in inspiration is as follows. The diaphragm must press down and out, thus expanding the entire body at the waist; front, sides and back. At the same moment, the abdomen must expand, and the chest must fill and slightly expand. This is deep, full inflation, and is but the work of an instant. The reader should bear in mind that this does not mean undue inflation. It means a full, comfortable breath, with a free natural expansion of the entire trunk of the body. Too full a breath interferes and overweights, is the severest kind of a handicap. It is not the amount of breath inspired which gives sustaining

power, but the manner in which it is controlled and economized, the result of the right location and direction of effort.

Instantly, as full inflation is secured, set the diaphragm; this causes it to very slightly recede or flatten in taking a firm and correct position, but it does not lose its condition of expansion. This setting of the diaphragm is placing upon it that firm hold, grip or tension, which has been explained in the chapter on Artistic Breathing, in "The Voice from a Practical Standpoint." It is the same firm grip or tension which is placed upon the muscles of the arm when one wishes to apply the strength of the arm to the control of a weight or any resisting force. With this firm grip or hold upon the diaphragm, the singer is enabled, by the strength of the diaphragm, to control all movements so far as restraining, diminishing or increasing the pressure of the air in the lungs is concerned. The body when expanded is highly elastic, and its tendency, unless controlled, is to at once go back to a position of repose. The expanded lungs are elastic, the inspired air is elastic, and with a singer who does not know how to control all parts or movements on full inflation, tone production means a prodigal waste of breath, a loss of position of all parts, a loss of all true conditions of tone. It

means the relaxation of vocal muscles which should be tense, and the contraction of interfering muscles which should be relaxed and flexible in order to produce artistic tone.

If it is desired to produce tone on full inflation about the middle of the voice, the diaphragm is set in order to first restrain the pressure and secure correct and natural conditions. The chest is arched in proportion to the power or pitch of the tone, and the abdominal muscles contract and press up also in accordance with the power or pitch of the tone.

By the contraction and upward pressure of the abdominal muscles the entire column or body of air in the lungs is pressed from below upward, thus enabling the singer to keep constantly in the chest, and directly under the organ of sound, the same density and direct pressure of the air column. This direction of effort or upward pressure of the abdominal muscles may be said to be automatic. It is perfectly natural and will take place if the diaphragm and chest are properly managed, without a direct effort or even a thought on the part of singer. The pressure of these muscles must be always in accordance with the power or pitch of the tone; the high tone, of course, requires more effort then the middle or low tone. After a little time during the production of tone it will be found

that the upward contraction and pressure of the abdominal muscles becomes to a certain extent exhausted, then the diaphragm takes up the movement and continues the upward pressure and control; thus the control of the breath passes gradually from the passive to the active. The abdominal muscles, however, never lose the contraction and position acquired by their upward movement, during the production of tone, and seek a position of repose, only when the tone ceases.

When on full inflation the diaphragm is firmly set, and the grip or hold is sufficient, then by the strength of this muscle the elastic and powerful pressure of the expanded muscles of the body can be fully controlled. Thus, by the control of the diaphragm, pressure upon the imprisoned air can be restrained, diminished, or increased at will. None but those who have mastered this controlling influence and power of the diaphragm can ever fully appreciate its vast importance. First on full inflation breathing is altogether passive, and it is the office of the diaphragm to assist in restraining the powerful pressure of the expanded body upon the imprisoned air in the lungs; as tone is prolonged the passive gradually merges into the active; then the diaphragm if properly managed supplies most of needed pressure or driving power. It is then that it presses in and up, thus enabling

the singer to keep the chest expanded, and the same density of air under the organ of voice to the last. In this way and in this way only, the very last particle of breath used can be as effective as the first. When the diaphragm is firmly set, it forms a solid upper framework upon which the muscles of the abdomen contract, pull, and press upwards.

By the strength and control of the diaphragm the singer is enabled to constantly expand or arch the chest much or little at will. The following is the direction of effort of diaphragm and chest in singing ascending and descending movements. In an ascending scale the diaphragm at the start is set and just sufficient effort is used to control tone at an easy pitch; the chest at the start is also slightly arched, just sufficient to secure correct position and firmness at the organ of sound and the desired acoustic conditions. As the voice ascends the grip and contraction of the diaphragm slightly increases from note to note, and the arching of the chest is constantly slightly increased; between two notes of the scale this is scarcely perceptible, but from one to eight of the scale it is often quite marked, especially if the tone is full and the movement slow. In singing descending scales or movements, at the start the grip or tension of the diaphram is the firmest and

the arching of the chest is the highest. As the voice descends the chest gradually recedes, but never goes down to a condition of repose until the tone ceases. At the same time the intensity of the grip or hold of the diaphragm is slightly and gradually diminished, but the control must never be lost by relaxation; so long as the voice descends or the tone is prolonged, the singer must control the diaphragm, and by contraction keep the required density of the air column under the organ of sound, and retain the necessary acoustic conditions. When the tone is stopped, then and then only, can the diaphragm be released and seek a position of repose.

The descending movement in singing is very much like going down a steep hill; one must control the muscles and hold back, as it were. This with many is even more difficult than in ascending, until they find out how to control the diaphragm under all circumstances. With them descending means relaxion, just as ascending, descending or prolonged tone with many always means a contracted instead of an expanded chest.

The above direction of effort of all the parts is true and natural support in singing. It is the only way in which it is possible to secure the conditions necessary to the production of artistic

tone. It should be borne in mind that it is at no time undue effort; it is natural, strengthening, and therefore right. It is at all times when understood and mastered more a question of correct position than of effort. The movements of the breathing muscles when properly trained finally become automatic, and if the singer will but stand well, he need never give them a thought; they then become the servants of his will and always respond to his desire.

As we have not correct direct control of the parts or movements above the chest, their action must be automatic; they must be controlled by the movements of other parts or by correct thought. Thus a right action of the breathing muscles controls the position, adjustment and firmness of the organ of sound itself. The larynx is very largely controlled by the action of the chest muscles. In fact all true acoustic conditions, and that perfect freedom of action of all the parts above the chest, so necessary, are largely due to the correct management of the strong muscles of the body. Without correct action and control of the breathing muscles and of the chest, it is impossible to have perfect freedom of action of the strong muscles of the pharynx, so necessary to a free and natural form, action, and placing of the air current above the larynx.

When the muscles of the pharynx are not flexible and pliable, when they are called upon to do the work of other muscles, then they become interfering muscles. When they are forced to do the work which the chest should do; when they are compelled to act as a support to the organ of sound, to act as a resistance to the pressure of the air current, then they narrow and thicken, and the voice becomes pinched, throaty, hard and unmusical.

The most difficult thing to accomplish in the training of the voice is to secure at all times and under all circumstances, a perfectly free, natural, and automatic action of the parts above the chest; the movements over which we have not correct direct control. To do this, we must train and study to balance the forces, we must secure a condition of equal pressure and resistance. This, the central thought in the training of the voice, we shall endeavor to simplify and make plain as we proceed.

ARTICLE 4.

Motive Power.

The movements or action of the muscles or parts of the body, as given in the preceding article, we find are devoted to securing two separate

and distinct conditions of control, namely, pressure and resistance. The office of certain muscles is almost entirely that of breathing, inspiration and expiration. The office of other muscles is to secure a condition of resistance which will in a correct and natural way balance or control the breath pressure, and which resistance is of vast importance to all who use the voice. The former we will call the Motive Power; the latter, Resistance or the Resisting Force.

The motive power, so far as it concerns breath-taking, is well understood and has been largely written upon, but the influence of even the motive power in restraining and controlling the breath, after taken, is not so well understood. Resistance or the resisting force in singing, with a few marked exceptions, has been almost entirely overlooked.

The motive power, or the muscles which in living, in talking and in singing control the breathing, inspiration almost entirely and expiration largely, are the abdominal muscles, the diaphragm and the intercostal muscles. These muscles fill and expand the lungs and control the pressure after the breath is taken. Upon the management of these muscles depends, almost entirely, correct inspiration. This side of

the question is not difficult to master, unless a natural action is impossible, owing to habits of dress, of living, of disease or deformity. Many acquire correct breath-taking, but never learn to apply the properly taken breath to producing and sustaining tone. It is a common thing to have applicants for lessons say, "Oh, yes! I breathe correctly, I understand deep breathing." Upon investigation, however, it will be found that while some do take breath aright, but few have a correct idea of right control after taken. They expand the body in breath taking, but instantly relax in producing tone; they fill up and then run down as it were; of course all true conditions of tone are wanting.

The important office which the motive power, the combined action of the breathing muscles, performs in the act of singing, is the control of the breath pressure after the breath is taken. This control is the result of a direct local management of the breathing muscles. Indirectly, a proper management of the motive power aids in controlling the exit of the air at the organ of sound by making it possible to secure correct and natural conditions there during tone production. The control of the motive power is due to the hold, grip or tension placed upon the muscles, and especially the diaphragm, as set

forth in the preceding article. By this grip or tension the singer has, after the muscles are trained and strengthened, the most absolute power and control over the breath pressure; he can restrain or drive at will, give or take at pleasure; by it he grows strong and singing becomes a delight. It should be remembered that of itself the action of no one part of the voice-producing apparatus can be perfect, or can be of much practical value. Thus unless the controlling influence of the motive power be applied to producing and sustaining tone, it is of little force. Unless the motive power acts in harmony with the resisting force in securing correct conditions, much of its vast influence on the voice is lost. It is sometimes said that the action of certain breathing muscles is antagonistic to the action of other breathing muscles, in that they oppose each other; this is no doubt true so far as the direction of effort is concerned. In right production we have pressure and resistance. The whole aim or object of correct study is to first secure that which is the most important of all, a condition of equal pressure and resistance at the organ of sound itself. This brings us to a consideration of the important subject of "Resistance," or the Resisting Force.

I think a word here might be in place with

regard to an impression which prevails with many that abdominal breathing is injurious. A lady pupil said that she debated the propriety of coming to me for six long months, because I advocated abdominal breathing in "The Voice from a Practical Standpoint." She liked everything in the book but the abdominal breathing. That she was afraid of. She had had an experience with what she called abdominal breathing, and wanted no more. At last a friend told her that what she called abdominal breathing and the principles set forth in my book, were not at all the same. She came, and, much to her delight, found deep breathing to be just the thing she wanted and needed. Instead of being weakening and injurious, she found it to be healthful and strengthening ; she found it to be the only foundation upon which it is possible to correctly and fully train and develop all the powers of the singer. Deep breathing, like many other things, is condemned by those who do not understand it. Many who try to teach abdominal breathing attempt to make the muscles of the abdomen do the work which nature intended that the diaphragm should do ; hence unnatural effort and force are resorted to, and weakness and often injury follow. Deep breathing at all times is more a matter of position than

of effort. It is never an undue effort, but depends, after it is understood, largely upon the manner in which the singer stands or carries himself. It is a natural, healthful, invigorating exercise, and to many with weak lungs and chest is worth more than any course of medicine.

ARTICLE 5.

Resistance.

It is a law of nature that in order to secure a condition of repose when there are opposing forces, one force must counterbalance the other. The entire universe is so constructed. Our physical system is so planned and controlled; "there are forces placed in opposition, so that when in a state of repose, muscles are not inert, but balance each other, which condition is called tonicity. This law of resistance or tonicity is the principle by which a fluid may be imprisoned."

The forces here referred to are, first, the Motive power, the driving and controlling force; second, the Resisting or opposing force, which I have termed "*resistance.*" This important subject of resistance, in order that it may be more clearly stated, will be divided into two articles. First we will consider that resistance over which we have correct direct control. Second, "The true point of resistance" or that resistance over

which we have not correct direct control, but which is controlled automatically by a proper management and use of other parts. It is highly important to know and understand the nature, control and influence of resistance in the use of the voice.

With many singers and with many systems of voice training the first and only force duly and properly considered is the motive power, and often that is not well understood or applied; result, pushed, breathy, hard, over-strained voice; no balancing of the forces; no relief from undue pressure; no controlled breath exit.

When there is no balancing of the forces in tone production, when the pressure is not controlled by proper resistance, then the force of the pressure comes directly upon the delicate muscles of the organ of sound; muscles which nature never intended should act as resisting muscles, but whose office is to produce tone only. When the pressure is thus allowed to come directly upon the organ of sound, then nature, in order to save the voice from immediate ruin, allows the organ of sound to be pushed out of place; result, muscles which should be tense and vibrant relax, while other muscles, not vocal muscles, which should be flexible and pliable, harden and thicken in order to come to the support of the delicate organ

of sound; they then become interfering muscles. The conditions then are, relaxed vocal muscles out of position, and pinched, narrowed, thickened hardened muscles of the pharynx and upper throat; result, relaxed breathy tone, or hard, pushed, unmusical effects. This is nature's way of saving the voice; but even nature cannot do this and allow the production of beautiful tone at the same time. The pushed voice, as is shown in "The Voice from a Practical Standpoint" can never develop true musical tone; and in proportion as it is pushed, so are all true conditions disturbed or destroyed.

In tone production there must be resistance as well as pressure. The force of the air current must be broken somewhere and somehow. If it is not done in the right way, it is sure to be done in the wrong way. There can be no tone good or bad without, to a certain extent at least, imprisoning and compressing the air and controlling and breaking the force of the air current. There is but one true or right point of resistance, which is secured only by the way in which we manage the resisting force over which we have correct direct control. There are many wrong points of resistance which are the result of wrong conditions; muscles which when forced into wrong action become interfering muscles instead of aiding in

the development of freedom and beauty of voice.

The resisting force over which we have correct direct control lies in the chest, in the strong muscles of the chest; and the power or influence of this force on the voice, during the act of singing, depends upon the manner in which we control the movements of the chest and apply the strength of the chest muscles. In correct breathing the chest has very little to do with inspiration, but it has much to do with expiration during the act of singing. The office of the chest is that of resistance and resonance. No wonder then that the powers of the singer who depends entirely upon the action of the chest, are limited. The chest is called upon to perform the act of inspiration as well as expiration; to supply the motive power as well as resistance. Of course under such circumstances true conditions are impossible. If singers will allow themselves to be ruled by fashion and the modern habits of life, they must suffer accordingly. I have known more than one promising voice to comparatively fail for no other reason than the above.

The action of the chest has, to a certain extent, been set forth in the article on the Direction of Effort. When in singing it is desired to produce tone on full inflation, the diaphragm

must first be set as before described, and the chest slightly arched. The arching of the chest and the pull of the chest muscles must be exactly in proportion to the pressure or contraction of the diaphragm. Much depends upon this balancing of the forces in the way of position and condition at the organ of sound itself. One of the must common faults of singers is a loss of position and therefore of true condition at the organ of sound, just at the attack or the start of tone. The resistance does not balance the pressure. The direction of thought and, of course, of effort is wrong, hence the organ of sound loses its position. There is then a slip or loss of right condition at the true point of resistance, which means a loss of the control of the exit of the air at the organ of sound itself; result, wrong control, and breathy, unsatisfactory tone. This slip, or loss of control at the organ of sound, is a common fault with even many so-called trained public singers. What this slip or loss is, and how to control it, should be the first consideration of every singer.

By the arching of the chest referred to we secure acoustic conditions at the organ of sound and in the pharynx which can be attained in no other way. The cavities then expand instead of contract, and expansion there means re-inforce-

ment and resonance. By the pull of the chest muscles we secure a proper setting or position of the organ of sound itself. This setting of the voice can never be correctly done by local effort. The action when right is always automatic and can be controlled, only through a proper management of chest and chest muscles. In order that I may not be misunderstood here, allow me to say that I do not at all mean a fixed larynx. Whether the larynx be high, medium or low, the control is the same in kind if not in quantity.

The proper arching of the chest depends upon the setting and strength of the diaphragm; the action of the one must be influenced by the firmness and contraction of the other, together with the power, pitch and direction of tone ascending or descending. The pull of the chest muscles is from the centre to the sides and slightly down at the sides, assisted by a slight backward movement of the shoulders. This action of the chest and chest muscles is not one of inspiration, but of expiration; is not pressure but is resistance; should never be used as pressure or as driving force in the use of the voice. Like the motive power, it is not merely a great physical force, it is more position than effort; it should never be the result of undue effort; it is a perfectly natural, healthful, strengthening movement.

By its proper application the singer or public speaker has a feeling of confidence, of control, of strength which it is impossible to acquire in any other way.

A correct singing tone is not the result of breath in escape, but of breath, imprisoned, compressed and controlled in exit. It is by a proper balancing of the forces only, which must be the result of a right direction of thought, that we gain those true conditions at the organ of sound which give us absolute control of the exit of the air current. In this way we have the same conditions, quality, purity and control on loud, medium and soft tone. In this way we have subjugated strength, which enables us to display that suppressed energy or emotion which gives to the voice so much reserve force and such variety of tone color, which is the perfection of art. In this way we can have perfect freedom of throat action and of voice; no interference of throat muscles, of tongue, of lips, of face action; and yet the voice is not relaxed and does not run away from one, as is the experience of so many; on the other hand, one has perfect control of it and can increase or diminish the power at pleasure.

The voice should be like the thoroughly trained, high strung horse, which goes because his master

allows him to go and not because he makes him go. The voice should be so trained that when the conditions are right we let it sing and do not have to make it sing.

Hence the importance of resistance, "for it is the quantity of steam that cannot escape that makes the train go; it is the quantity of gas that cannot get out that makes the balloon ascend; it is the quantity of wind that cannot pass through a sail that propels the ship; and it is the quantity of breath that cannot escape that makes us sing."

The following extracts are taken from a paper read at Cambridge, England, Jan. 3rd, 1889, before The National Society of Professional Musicians, by Charles Lunn, author of "The Philosophy of Voice."

"The fundamental and cardinal points of the old school were these:—

"1st. Complete pectoral inflation, as contrasted with clavicular and diaphragmatic or abdominal breathing.

"2nd. Holding and compressing the air, as contrasted with no hold and no compression. . . . .

"The result of these two different and contradictory methods on the mind of the singer is this—The wills of the old singers were used to restrain, an automatic and a mechanical power, so that the softer they sang the more they willed, and the louder they sang, the less they willed, full voice being self-produced, like, in short, restraining a thorough-bred horse. On the other side, the will is used to produce power; the greater the power the greater the will force, like whipping a broken down hack, and the effect is equally marked by

evenness of tone as contrasted with unsteadiness, in confidence of mind, as contrasted with distrust. And the test of the singer was shown acoustically by the softest sound, being clear; and the physical test was shown in high, clear, soft and sustained largo singing. Those who can remember Grisi, Mario, Giuglini and Reeves, in sostenuto passages will know what I mean.

"The one system I assert to be natural production in conformity with physical laws; the other system I denounce as being artificial production in violation of such laws. . . . .

"I go to show that there is a triple balance in the organ of voice, not a single one like a strained piano wire; there is a tension up and down, and down and up; right and left, and left and right; back and front, and front and back; six points of resistance forming, as it were, an equilateral triangle in force. This balance is completely unstrung in ordinary breathing, . . . It is unstrung on some consonants and only partially strung on others. It is as a violinist unstrings his bow, and a drummer unstrains his drum-skin. Before playing, the first thing these men do is to tighten up their instruments, and this is what the old teachers did with the voice. . . . ."

"We can draw in by an act of will more air than we ordinarily inspire, and if we choose we can will to restrain or suspend the bodily muscular contraction that would automatically eject the air, and so we can cause such air to remain inside us in a state of stagnation, but under such conditions we cannot compress that air. In order to compress, we require a corresponding resistance at the only point of exit—that is—at the larynx. We require a resistance exactly corresponding to the degree of compression applied. . . . ."

"This statical grip has its mental equivalent, the parts by mutual pressure witnessing each to each. There is in right production a consciousness of possession which imperfect production never gives."

The mechanical or muscular resistance over which we have correct direct control is the action or effort of the chest and chest muscles as

described. When the controlling forces, or the influence of the motive power and of resistance, are fully understood and mastered, then the action of all the parts above the chest becomes automatic, natural and therefore right; then the conditions necessary for the production of correct and artistic tone are secured at the *true point of resistance.*

ARTICLE 6.

The True Point of Resistance.

There can be no pure, beautiful, artistic tone without imprisoned and compressed air and controlled breath exit. Breath in escape during tone production, that is not in vibration, clouds and destroys the beauty of the tone and shows wrong production or control to the extent of the breath escape; so that a breathy voice is the result of wrong tone production; and in proportion as the breath is controlled so is right production approximated. Right production, artistic tone, means absolute breath control; it means inflation of the lungs, imprisoned and compressed air, inflation of the cavities, and the control of the vibratory air current above the true cords, the control at the true point of resistance.

As we have learned in preceding articles, those movements or efforts over which we have correct direct control in the management of the breath in singing, are of the motive power muscles, and of the chest in resistance. A proper management of these forces or movements together with correct form and placing, right direction of thought and effort, must result in securing right conditions at the organ of sound itself; correct breath control at the true point of resistance.

The force of the air current must be broken somewhere and somehow, and if it is not done at the right place and in the right way, it is sure to be done at the wrong place and in the wrong way. It is not reasonable to suppose that the delicate vocal cords and the muscles which manipulate them are able to control the exit of the air current in forcible or even in soft subdued singing. They cannot possibly do this and maintain correct position and condition in singing. They do not under any circumstances ever alone control the exit of the air current during tone production, it matters not how good or bad the tone may be, unless the tone be simply breath escape, as it usually is under the influence of laryngoscopic examination. The force of the air current must be broken. There are points above the organ of sound which are made by singers, wrong points of resistance,

but when used as points of resistance, the production of artistic tone is impossible.

The use of these wrong points of resistance is sometimes justifiable in order to produce certain effects. The singer who has mastered all true conditions, can then resort to any means to produce certain effects, just as the man who has mastered the science of harmony becomes a law unto himself; he is then no more entirely controlled by rules, laws, and regulations. So let the singer master right breath control and the true point of resistance, and all others are his to use at will. Hence it is important that we should learn what this true point of resistance is and its influence on the voice, as well as of other points and their influence.

An essay read at the Meeting of the Music Teachers' National Association at Indianapolis, July 6th, 1887, by Ephraim Cutter, A. M., M. D., LL. D., of New York, contains the following highly important paragraphs:

"As the observer looks into the laryngoscope during the demonstration of the larnyx in the act of laughing, there appears above the pearly white vocal cords, another pair which have the color of the mucous membrane of the throat, *i. e.*, red. They are about half an inch above the vocal cords, and their general shape and appearance are like them save in color. Their function has not been well understood save as one of the three valves which close the windpipe during the act of swallowing. There is, however, another function, which is

of great interest to singers and speakers, found to belong to these false vocal cords. One of the great points that vocal teachers make, very properly, is the right expenditure and husbanding of the breath. After inspiration they insist that the abdominal muscles must be kept tense and the breath held in. Thus results of great vocal efficiency are gained with the minimum of force; or, to put it differently, if one properly maintains the abdominal pressure and the least expenditure of breath, speaking and singing can be maintained for a longer time and with less tire to hearers and actors than with a slackly held abdomen. Now this is done instinctively, and it may not be of much practical use to know the modus operandi; still it is worth recording as a fact that the false vocal cords or ventricular bands are the agents that hold in the breath, leaving the vocal cords to rest and to engage in work at the will of the performer.

"Those who observe will note at the instant of holding the breath that the larynx is platformed with a red carpeted floor in place of the white pearly platform seen during the playing on the larynx as an instrument. There is no doubt that the ventricular bands give timbre to the voice when diseased. I have traced the harsh sounds heard in spasmodic croup with their peculiar timbre and clangor, in some instances to a thickened and swelled condition of these vocal cords. I think I was the first to note this."

Such statements coming from such men as Dr. Cutter, men who stand high in their own, the medical profession, must have vast influence in settling many of the great and important questions in artistic voice production.

The true point of resistance then is the approximation of the ventricular bands, the false vocal cords. These bands or cords Dr. Cutter has called "the breath bands," which term I shall adopt. The control or approximation of these

breath bands is automatic, is the result of a right management of the motive power and of chest resistance. Before considering the influence of the action of the breath bands and of the inflation of the cavities of the larynx, the ventricles of the larynx, on tone production, let us see what other authorities have said on this subject.

The following extracts are taken from a paper, "The Physiology of the Larynx," by John Wyllie, M. D., M. R. C. S., of Edinburgh, Scotland, written in 1865, republished in Werner's "Voice Magazine" in 1884. They are taken mostly from that part of the paper which relates to the valvular action of the larynx. This valvular action of the larynx is important considered in relation to resistance in singing.

"THE VALVULAR ACTION OF THE GLOTTIS.

"The circumstances in which shutting of the glottis is observed to take place may be classed under three heads:—

"1. Partial closure takes place during phonation, the vocal ligaments being then approximated, so that only a narrow chink is left, through which the air escapes.

"2. In the act of deglutition, complete closure occurs simultaneously with the descent of the epiglottis, as we have already seen.

"3. Perfect closure also takes place whenever the air is compressed within the lungs and trachea, whether by a voluntary effort, as in holding the breath, or involuntarily, as before each act of coughing.

"The mechanism of this voluntary closure has been of late years

beautifully demonstrated by Czermak. 'During complete and hermetic closure,' says that author, 'I have observed the following phenomena:

"'1. The arytenoid cartilages intimately meet at their internal surfaces and processes, and bring the edges of the vocal cords in contact.

"'2. The superior vocal cords approach the inferior so as to obliterate the ventricles of Morgagni, at the same time they also meet in the median line.

"'3. The epiglottis being lowered and its cushion made more prominent still, it presses against the closed glottis, the contact taking place from before backward. All these changes take place with such rapidity that great attention is necessary to examine them in detail.'

"The mode of performing these experiments is, first to shut the glottis gently, and then to compress the air within the chest and trachea, by putting the muscles of expiration more and more powerfully into action.

"With the second statement in Czermak's account of the phenomena, viz., that the superior cords approach the inferior so as to obliterate the ventricles of Morgagni, my own observations, as will be seen presently, do not concur. Any observation with the laryngoscope, regarding the condition of these ventricles, is extremely liable to fallacy, for their oblong orifices are situated in the lateral walls of the larnyx and look inward, so that, observing them from above, it is almost impossible to tell whether they are opened or closed.

"The question now to be considered is, What is the use of this complexity in the shutting of the glottis? 'No doubt,' as Czermak remarks, 'these three-fold occurrences in the hermetic closure of the larynx explain the resistance which the glottis successfully opposes to the pressure of the air without the development of much force during the effort.' But what is the exact importance of the false and of the true vocal cords,—what is the physiological purpose of the

ventricles of Morgagni? These are the problems which remain unsolved.

"The difficulty in deciding these questions has, it appears to me, arisen in some measure from an anatomical misconception. The vocal cords are considered by many as the free edges of membranes which are flattened both above and below. But if a vertical section be made through the larynx so as to divide both false and true cords transversely, it will be found, that when these are approximated, the cavity of the larynx above the false cords, as well as that of the trachea below the true, is wedge-shaped. When thus in opposition, the upper surfaces of the true vocal ligaments present a broad, flattened plane slightly hollowed out on each side, but on their tracheal aspect the mucous membrane is observed to fall away obliquely, downward and outward, thus leaving an angle of considerable size, which forms the margin of each vocal ligament. The same obliquity is observed in the mucous membrane above the false vocal cords, whilst their lower margins are defined by the openings of the ventricles of Morgagni, well-marked pouches, which extend upward behind them about half an inch.

"Now it is to be borne in mind that by closure of the glottis, complete stoppage is effected, not only of inspiration, but also of expiration, the most powerful efforts at either being rendered quite ineffectual. This is, no doubt, in a sense due to the action of those intrinsic muscles of the larynx which close the rima, but the strength of these comparatively minute structures is surely in itself inadequate to resist the enormous power which the air may be made to exert upon the glottis from within, during a forcible attempt at expiration, as well as its pressure from without when we try to inspire.* From this consideration one is naturally led to suspect the existence in the

* "We may wonder that muscular fasciculi so slight as those of the larynx, however advantageously placed, should be capable of counteracting the efforts of the diaphragm and other muscles of inspiration. But they are found to be no less efficient against the muscles of expiration."—Mayo's Physiology.

glottis of some well adapted valvular arrangements suited to control both the entrance and the exit of the air. With a view of ascertaining whether such arrangements exist, and, if so, what is their precise nature, I made the following experiments upon the dead larynx:—

"Having brought together the true cords in the vocalizing position, by transfixing the arytenoid cartilages with a needle, and applying over it a figure-of-eight ligature in a manner which I shall afterward describe, I blew upward through the trachea, and at the same time attempted to stop the current of air by bringing the true vocal chords accurately into contact; this being done by pressing the arytenoids firmly between the finger and the thumb. After repeated trial I found that no manner of adjusting the cartilages could completely obstruct the passage of the air, for, as I have already said, the space in the trachea below the vocal chords is wedge-shaped, and the air was thus enabled to wedge itself between the vocal ligaments, producing in its escape a sound which more or less resembled the voice. Feeling satisfied that the true cords could not present any serious obstacle to the exit of air when the glottis is closed, I now drew air backward through the larynx, in order to test their value as opposing its entrance during attempted inspiration. I found that by a very slight and easy adjustment of the arytenoid cartilages I could prevent its entrance entirely. The cords did not require to be forcibly pressed together; the circumstances most favorable for obtaining their perfect valvular action were that they should be accurately approximated but not stretched, so that when air was blown upward through the trachea a low note was produced. In this condition, by gently pressing forward the apices of the arytenoid cartilage, the air was completely obstructed.

"I next proceeded to ascertain the effect of bringing together the false vocal cords. These are not so easily brought in contact as the true, and the means adopted were therefore rather more complicated. Still, keeping the arytenoid cartilages fixed together as before, with a needle and a ligature, I passed, in addition, two other needles through the anterior surface of the thyroid cartilage, one on each side of the middle line, just opposite the anterior attachments

of the cords, and carefully guided their points backward to the arytenoid extremities, so that each needle was contained within the free edge of a false ligament. The posterior attachments of the cords were then approximated by pressure between the finger and thumb, and at the same time in their whole length they were brought into close apposition by separating the heads of the needles in front of the thyroid cartilage. On attempting to blow upward through the trachea, when the parts were so arranged, the closure of the glottis was found to be complete. The simple co-aptation of the free edges of the false cords proved itself sufficient to obstruct entirely even a powerful current of air from below.

"The conclusion to be derived from these experiments is obvious. There is within the larynx a double valve which is capable of controlling both the exit and entrance of air. The plan found so commonly throughout the body in such structures, in the aortic and ileocoecal orifices, and in the course of the veins, holds good here likewise. In the upper half the resemblance is most obvious. Comparing it with the aortic valve, we find the representatives of the sinuses of the Valsalva in the well-marked ventricles of Morgagni, whilst the cusps are reproduced in the two folds of mucous membrane whose free edges are known as the false vocal cords."

"The same design may be traced in the lower half of the valve. When the true vocal ligaments are brought into apposition, no deep sinus is found on either side, but their upper surfaces form together a broad, flattened plane, slightly hollowed out exterior to the margins of the rima glottidis, and this arrangement, owing to the greater density and mobility of the parts, is found to act as efficiently as the well marked ventricles and cusps of the upper valve.

"A laryngoscopic examination fully confirms the view which I have just stated. The following phenomena may then be observed:—

"1. When the glottis is simply closed and no effort is made either to take in breath or to expire, the false cords are separated by a very narrow interval, through which the edges of the true vocal ligaments may be seen in close apposition.

"2. When an effort is made to inspire, the superior cords meet in the middle line, so as to leave only a very small triangular opening, posteriorly, through which there still may be caught a glimmering of the pale surface of the true ligaments.

"3. When expiration is attempted, false cords are immediately co-aptated throughout their whole length, and if the effort made be powerful, the parts above are observed 'to arch or curve outward without allowing the air to escape' (Czermak).

"This swelling out of the mucous membrane at the upper part of the larynx, can be due to nothing but the inflation of the ventricles of Morgagni beneath.

"The physiology of these ventricles and of the superior ligaments of the larynx, is thus after all so beautifully simple as to render it very surprising that their action was not long since recognized."

In an article on "The Valvular Action of the Larynx," by T. Lauder Brunton, M.D., F. R. S., and Theo. Cash, M. D., of London, Eng., published in Werner's "Voice Magazine," April, 1885, they say:—

"Our own investigations completely confirm those of Dr. Wyllie . . . . If the view that the functions of the false cords or ventricular bands is to close the glottis during effort, and thus to fix the thorax, is correct, we should expect them to be very strongly developed in those animals whose habits render such fixation likely to be serviceable; on the other hand, we should expect them to be absent in those animals in which fixation of the thorax would be of little or no service: and this seems to be actually the case."

So far the testimony surely goes to prove that the true cords offer very little resistance to the exit of the air, but that the breath bands (false

cords) are the chief factors in securing the complete closure and in controlling the exit of the air; they form the true point of resistance.

Dr. J. Farrar, in his book, "The Human Voice and Connected Parts,"—says of the ventricles of the larynx:

"These are hollows or recesses, and are situated immediately above the glottis, being bounded below by this fissure. The superior boundary is formed by the false vocal cords, and thus the ventricles are situated wholly between the two pairs of vocal cords.

"During the vibration of the vocal cords these do not strike against the lateral walls of the larynx. Such a circumstance, indeed, would be fatal to their sonorous action or resonance, and the resulting note, if a note were possible, would be dull and dead. Provision is therefore made by which any amount or degree of vibration may take place without the danger of such a circumstance happening, in the existence of special excavations in the sides of the larynx immediately above the vocal cords. And these excavations are the ventricles of the larynx, already described. The representative in brass and wind instruments of these excavations is the bell-like expansion of the mouthpiece, to allow room for the vibration of the lips."

Morell Mackenzie in his work, "The Hygiene of the Vocal Organs," says:

"Immediately above the vocal cord on each side is a little pocket or ventricle which is very variable in size, being sometimes a mere slit, whilst in other cases it is large enough to admit the point of the finger. The lower edge of this opening is formed by the vocal cord itself, whilst the upper consists of a narrow fringe of membrane, formerly known as the false cord, to which many years ago I gave the name of 'ventricular band.'"

The above testimony by medical men, specialists, who stand high in their profession, some of whom have a world-wide reputation, should convince the most skeptical of the existence of the ventricles of the larynx, of the false vocal cords or breath bands, and of the important part they perform in holding and imprisoning the air in the lungs. All laryngoscopists agree that the breath bands close tightly in retaining or holding the breath in the lungs. This action of the breath bands is very distinctly seen by the aid of the laryngoscope. Vocal science owes much to the specialists, and to the medical fraternity generally, for their valuable discoveries made by the aid of the laryngoscope; and for their valuable testimony and opinions based upon their discoveries, even though they are not of much practical value in the training of the voice.

At first thought it does seem strange that no throat or lung specialist, no laryngoscopist, so far as I know, has ever thought of the practical value of the action of the breath bands in restraining or controlling the exit of the air during the act of singing. No one of them, that I know of, has recorded anything with regard to their controlling the breath during tone production. If I am mistaken in this I would be glad to be corrected. Most writers on the voice also have burdened the

delicate vocal muscles with the additional severe and muscular effort of controlling the exit of the breath during the act of singing.

Upon second thought, however, when we consider that all tone production under laryngoscopic observation is wrong, is bad production, is merely breath escape, is in fact laryngeal and pharyngeal distortion; upon second thought, under such circumstances, it is not strange that laryngoscopists have never discovered or thought of the practical value of the breath bands in controlling the exit of the air, and thus relieving the vocal cords from strain during tone production?

Under laryngoscopic observation it is impossible to produce correct or artistic tone; it is impossible to secure those conditions necessary to right production. It is claimed that it has been and can be done. There may be those who can produce a fairly good sounding tone in this way, but that proves nothing, except the fact that it is possible for some people to do some things fairly well in a wrong way. Laryngoscopists continually see tone production under wrong conditions, and not being artistic singers, as a rule, this fact has not impressed itself upon their minds. They do not consider seriously the conditions or the result, so far as tone quality is concerned. Their aim is to get the best possible view of the vo-

cal apparatus, and during right production this is impossible.

Writers upon the voice whose opinions are based upon what they have seen of the action, mechanism, and formation of the vocal organ by the aid of the laryngoscope, apparently have lost sight of the fact that there is right and wrong tone production, producing good and bad tone, according as the conditions are right or wrong, natural or unnatural. This largely accounts for the fact that they have never discovered the practical value of the breath bands in controlling the exit of air during tone production.

Dr. Ephraim Cutter, before quoted, came nearer asserting the true principle of breath control in singing than any throat specialist I know of, when he said, "The false vocal cords or ventricular bands are the agents that hold in the breath, leaving the vocal cords to rest and to engage in work at the will of the performer. Those who observe will note at the instant of holding the breath that the larynx is platformed with a red carpeted floor in place of the white pearly platform seen during the playing on the larynx as an instrument."

Dr. Cutter gave a perfect demonstration of the above with his own throat. One could see the vocal cords almost their entire length and

breadth in action; and when the desire was to hold the breath, the false cords or breath bands were instantly co-aptated, thus locking the breath in, as it were, by the action of the breath bands, securing the valvular conditions so fully described by Dr. Wyllie.

As we have learned, the breath bands do completely close and lock the breath in when it is desired to hold the breath. When it is desired to let the breath go without control, complete separation takes place; this has been and can be seen at any time by the aid of the laryngoscope.

As the breath bands close tightly in holding the breath and completely separate when no control is desired, is it not reasonable to suppose, or to assert, that there is partial closure, more or less, when it is desired to control the exit of the breath, to give it out slowly or by degrees during tone production.

My own observations by the aid of the laryngoscope are as follows : When in examining a voice that understands correct tone production, that knows right production from wrong and can produce either at will,—when such a voice is under examination, and the vocal cords are in full view, then it will be found that the production is wrong, and the tone is bad. Then it will be seen that the breath bands are completely sep-

arated and all parts in wrong or unnatural position for artistic or beautiful tone. When it is desired to change gradually from wrong to right production while producing tone, then the breath bands will be seen to slowly approximate as the change is made ; at the same time the entire throat so changes form and position that the vocal organ is soon lost to sight. Of course, with the most expert one can see but little movement in the right direction, owing to the change of form; enough, however, can be seen to convince those who are not too skeptical, those who are not too deep in the old worn ruts of imitation and experiment, that the breath bands do approximate and control the exit of the air in right production.

Beside the testimony of the eye, we have that of sensation. We know the sensation of complete separation, bad production, breath escape; we know the sensation of right production, beautiful tone, controlled breath exit. In changing, under laryngoscopic observation, from wrong to right, we start with the sensation of complete separation, breath escape; as we gradually approximate the right, the sensation changes from that of breath escape to partial breath control, as there is more or less approximation of the breath bands.

Now without stopping the tone, and by removing the mirror, we finally succeed in changing to right production, and the sensation felt of partial control, under slight approximation of the breath bands, gradually intensifies and becomes that of complete breath control, which is the result of right production. Here then we have the testimony of the eye, of sensation, and of the result in passing from wrong to right production, from bad to good tone, from no control to absolute control. Forcible and convincing testimony surely.

It may be said, and has been said, that it is not necessary to know these thing in order to sing well. True there have been and are many good singers, and not a few great ones, who have no knowledge of these things. If the influence of the motive power and of the resisting force over which we have correct direct control is understood and mastered, then right conditions at the organ of sound can be secured automatically, which is all that is necessary. But of the great number who have studied the voice, how few there are of whom it may be said that they have at all succeeded. A science or an art should benefit the many who are its votaries and not the few. If definite knowledge will aid in mastering a science, then it is right that such knowledge be laid

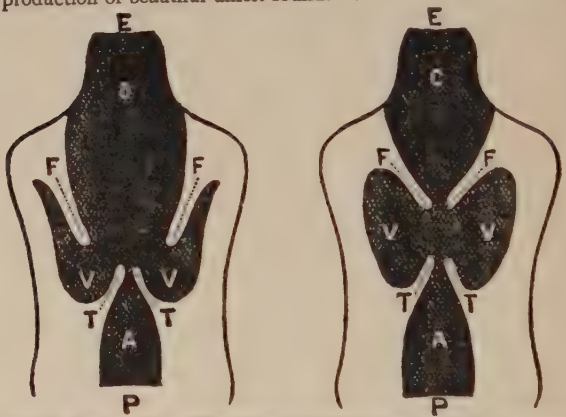
before those who pursue it. A knowledge of the fact that the approximation of the breath bands is the true point of resistance, and a knowledge of the fact that there is a definite way to secure and control this condition of resistance at the organ of sound, will beyond doubt greatly aid many in mastering the voice, in developing beautiful artistic tone.

This knowledge will be of special value to those who are capable of and are willing to *think.*

It remained, however, so far as I know, for a man, who is not only a deep thinker and investigator, but a musician, vocalist and teacher, as well, to discover or at least to publish to the world, the true action and office of the false vocal chords and their practical value, in training and developing the voice. I refer to Charles Lunn, of England, Author of "Philosophy of Voice," and other valuable works on the voice. The following extracts, together with the cuts showing right and wrong production, taken from "Philosophy of Voice" will give in part Mr. Lunn's views with regard to the false vocal cords, breath control, etc.

"Below are given two illustrations, one showing the form of the voice organs after twenty years of neglect or imperfect use, the other

showing the form of the parts in right relationship to each other for the production of beautiful unfelt sound. . . . .



"Hold the breath. The object of this is to stay all movement. When we are first learning to do a thing we pause to take aim, for it is more difficult to hit a moving thing than it is to hit a stationary one. Garcia nearly had the explanation of true production when he used the word 'accumulation,' but the word 'momentarily' spoilt it. When the air is only momentarily accumulated the instrument has slipped; the start is right, but the continuation of tone is wrong, owing to F F' (illus.) springing too widely open. In right production the compression of air can be continuous. This slipping of the higher part of the instrument is a common fault with beginners. . . . .

"Squeeze this imprisoned breath as much as possible by a general contraction of all the chest muscles; this act compresses the air within us. Under this condition F F and T T (illus.) are brought together. This imprisoned air when so acted upon, inflates the caverns (V) that lie between the false and true chords. The air catching in these caverns presses up the larynx and tightly closes it. We have transferred from our minds to a quite natural physical law

independent of mind, the power that shut the door and imprisoned the air below. Our minds have to act downwards to undo the natural resistance. Why should we make voice a question of personal work, when the voice under certain physical conditions will act for us automatically? We have, then, to withdraw the pressure a little before we can allow any self escape of air. . . . .

"Now either (1) the false cords may act in unison with the true, alternating as in laughter, between approximation and disjunction, like scissors. Or (2) the false cords may part so widely that they are unable to rule the air—this is ordinary, or false production, the true cords vibrating on a column of uncompressed air, which they cannot completely restrain; in effect weak, dead, or rough sound. Or (3) the true cords may completely open, the false cords being partially approached, in which case the air is heard to escape in a controlled hiss. Or (4) the false cords alone may slightly separate, assuming a fixed position, restraining the escape of vocalized air, while the true chords of themselves, by their own elasticity, alternate between parallel lines and ovals. This last alternative is true production. . . . .

"In false emission, the chambers are not inflated; thus, the muscles which draw together the vocal chords have to bear the brunt of the whole chest pressure, and, being of themselves too feeble to resist, of course succumb, and that is the sole reason of all feebleness and incapacity. So that my discovery of the use of the false cords and the ventricles just amounts to this: It proves that nature has ordained compensating forces, under which condition the minute muscles of the larynx can accurately act, but that under less favorable conditions these muscles can only partially fulfill the functions for which they are destined; this is in strict conformity with nature's universal principle of 'least action' (see Rev. Dr. Haughton, on 'Animal Mechanics'). In true song or speech the work of counterbalancing different degrees of pressure from below is done by the air being inverted, and forming an eddy in the chambers or spaces between the true and false cords. This is proved (1) by the fact that under the conditions of true sound the chambers can be felt to be

puffed out, while with false sounds they are not so felt; this accounts for the breadth of throat in public singers. (2) a true vocalist does not feel as though he were forcing air out, but as though he were actually drawing breath in, and this even when emitting the most powerful sounds. In false emission it is not so; the point of resistance breaking loose makes him feel as though he were running after a note to catch it. (3) A true vocalist knows but does not feel that he is singing; consciousness is the sole guide."

Also in Mr. Lunn's little book, "Artistic Voice." He says:

"Physiological results go to show approximation of false cords, inflation of ventricles, complete inflation, and backward push. . .

"There are, then, in right song two points of resistance in solids (cords), and two points of resistance in the fluid (air), and of the latter the internal area of the chest furnishes one point of resistance, the closed approximated cords and inflated ventricles furnish the other point of resistance, and under laryngeal distortion this latter does not obtain. Let me put it another way: There must be complete inflation; to keep complete inflation there must be inflation of ventricles; to obtain inflation of ventricles there must be approximation of false cords, and under these conditions the voice organs cannot be photographed. This was the school that made Mario, Santley, Maas, and Reeves, and in this school the balancing forces, to apply Cardinal Newman's expression, 'by mutual pressure witness each to each.'"

And in the Cambridge lecture before referred to, Mr. Lunn says:

"Some laryngologists, reasoning from a particular to a universal, allege that because they can only completely shut or completely open the false cords, that therefore these cords cannot be held by others in varying degrees ajar. This is something like the non-

pianist alleging that the pianist cannot move his fourth finger without moving another finger. One of the principle points of voice training is gaining isolated control of the false cords."

How are we to gain control of the false cords is the question? We are no more conscious of them than we are of the true cords. We have no more correct direct control of them than we have of the true cords. We are, however, highly conscious of the sensation of correct voice control, of resistance, of confidence, of strength and of power which a right action or control of the false cords gives us. We know from the sensation, the effect and the result when the false cords are properly controlled. We also know that they are properly controlled, indirectly, by the manner in which we manage the forces over which we have correct direct control the motive power and resisting force.

ARTICLE 7.

Disassociation of Muscular from Vocal Effort.

A writer has said, "free the vocal channel." This is very good advice, and this is the very thing that singers and speakers have endeavored to do in all ages, and are at this day striving to

accomplish. The importance of a free vocal channel is felt and acknowledged by all, and yet no one has ever told us definitely how to do this, how it can be done.

A few years ago I asked through the columns of "Werner's Voice Magazine," then "The Voice," for the opinions of leading thinkers and writers on the science of voice, as to the proper control of the form and action of the vibratory air current above the vocal cords. A short time after this there was expressed editorially in "The Voice," a desire for articles on the disassociation of muscular from vocal effort. These two calls bearing so directly upon the same important principles of right or artistic voice production went almost unheeded, at least so far as any direct or practical views on the subjects were concerned.

My aim here in this work is to show how to "free the vocal channel;" how to control the form and action of the air current above the vocal cords; how to disassociate all muscular from vocal effort above the chest muscles.

The singer who acquires a definite understanding and control of the motive power and resisting force whereby he is enabled to secure an automatic, a natural action of all the parts above the chest muscles; the singer who masters these forces,

over which he can have correct direct control, may surely enjoy the blessings and delights of a free vocal channel, a controlled air current or voice, and the disassociation of muscular from vocal effort. To accomplish this desired result all movements must finally be influenced or controlled, as we will find, by the mental process, by right thought, by a right direction of thought.

There are various points of resistance or control above the chest muscles; there is but one true point, that is the approximation of the false cords or breath bands. The other points may be and are used to produce certain effects, and at times to rest the muscles which produce artistic tone; but they are right and safe in the hands of him only who has mastered true resistance. Their use always means the association of muscular with vocal effort.

When the forces, pressure and resistance, are properly controlled and are equal, and the direction of thought is correct, then the breath bands approximate automatically, the ventricles of the larynx are inflated, the force of the air current is broken, and its exit controlled by the partially closed breath bands. Under these conditions all muscular effort, all grip, all contraction above the organ of sound can be controlled, overcome and finally eliminated. When the breath bands

approximate, the air rushing upward through the trachea, or wind-pipe, is turned aside by the approximated breath bands and forced into the cavities of the larynx which are thus expanded. This imprisoned air in the cavities re-acts upon the vocal cords from above, counter-acting the pressure of the air current from below. In this way we meet pressure from below with the resistance of an elastic air cushion, securing at the organ of sound a condition of equal pressure and resistance, thus preventing the vocal muscles from being pushed out of place or adjustment, and leaving them free to play and vibrate at the will of the singer.

When during tone production the exit of the air is controlled by the approximated breath bands then the force of the air current is thus broken and the temptation to control it by pinching and contracting above the organ of sound is greatly diminished ; it then passes quietly, a vibratory air current, into the pharynx and mouth, and seeks its placing as resonant tone. When right conditions are secured at the organ of sound itself, the muscles of the pharynx or throat, which are usually interfering muscles, then become flexible and pliable. Their office then is simply to form the outline of the resonance cavity of the pharynx, to form, expand or

diminish, in a flexible, relaxed, pliable way, at the will of the singer, according to the style or power of the tone desired.

When the conditions are right, then the usually contracted pillars of the fauces relax; they can then be widened or narrowed in a flexible way at the will of the singer; also the unruly tongue will then become pliable and the action natural and automatic. All trouble of the tongue is the result of a cause and not of the tongue itself; remove the cause, and the action of the tongue will be natural and therefore right. The cause is usually wrong effort above the organ of sound, due to wrong conditions at the organ of sound. The tongue and soft palate, when other parts are right, will surely be right themselves. It is by securing right conditions only at the organ of sound that all force, effort and distortion can be overcome or eliminated.

When the singer has learned to balance the forces, and thus to properly control the exit of the air current, he can sing with the utmost freedom of form and action of all the parts above the chest; then he can sing with the greatest or the least power without pinching, forcing or yelling; then he can finally gain that most to be desired of all things, absolute control of tone color; then singing becomes a healthful, manly, delightful recreation.

There can be no pure, beautiful, correct tone without imprisoned and compressed air and restrained or controlled breath exit ; that which gives the singer the delightful sensation of absolute control of voice, and not only the sensation, but the positive control itself. If this condition of compressed and restrained breath does not prevail, then the sensation is as though the voice were running away from you, and it is as natural under such circumstances to grip and grasp in the effort to control the voice as it is for a drowning man to catch at sticks and straws. Air in escape will not produce good tone. If resistance or control does not prevail at the proper place, it is sure to prevail at some other place, for the force of the current must be broken; hence other and wrong points of resistance.

When the exit of the breath is not controlled by the breath bands, then the air escapes at once into the pharynx. It is physically impossible for the delicate vocal muscles to control the breath exit and produce correct tone at the same time. That the effort is common to thus try to control the breath, witness the many pushed, hard, unmusical voices we hear ; the vocal organ and the vocal cords are pushed out of proper adjustment and true conditions, and desired results are impossible. When the air escapes,

without proper control, into the pharynx, the tendency is at once to grip or grasp and control it somewhere or somehow. If the effort is of the pharynx, then the muscles of the pharynx or throat contract and pinch; they then become interfering muscles, a wrong point of resistance, and the tone will be thick and throaty.

If the effort is of the pillars of the fauces and of the arch of the palate, then these muscles become a point of resistance; they then contract and harden, and the tone will be hard, metallic or white. If the effort be of the base of the tongue and the soft palate only, then the tone will be relaxed and breathy, as this point of resistance offers but little resistance or control.

If the effort be of the lower jaw, due to a stiffening of the lower jaw, then the entire throat hardens and narrows, thus offering a point of resistance which results in pinched, hard, unsympathetic tone; if it is due to protruding the lower jaw, then the entire formation of the pharynx is changed, the organ of sound forced out of position, all acoustic conditions are changed, and the dissonant or discordant elements of the voice at once become prominent; this is the worst of all wrong points of resistance, of all wrong effort.

If the effort be of the face muscles, especially

of the contraction of the lips in the attempt to form and control the tone, then the lips become a point of resistance and all true conditions and all desired results are wanting. One of these wrong points of resistance alone may prevail, or two or more at the same time. If the lips harden and contract, the pharynx will surely narrow: it is physically impossible to contract the lips without narrowing the pharynx. Hence the fallacy of the prevailing idea with regard to the training of the O (oh) and U (oo) by contracting and pushing the lips forward, as though they were controlled by a puckering or drawing string, such as was used to close the handkerchief and snuff-bags carried by ladies in our grandmothers' day. On the other hand, the pharynx may narrow and control without seriously affecting the lips.

Exactly in proportion as these wrong points of resistance prevail, so right control is lost at the true point of resistance; or in other words, exactly in proportion as right control is wanting at the true point of resistance, so are these other wrong points of resistance forced into action. Nature is very accommodating when we attempt to control in our way; but how much better the work is always done in her way when we understand her and trust her.

The corrective for all this is to set the voice at

the organ of sound, the larynx, by securing, automatically, true acoustic conditions and breath control. This can be accomplished, only by a right management of the motive power and resisting force over which we have correct direct control, and which management must be the result of correct thought based upon definite knowledge. In this way, and in this way only, is it possible to free the vocal channel, to control the air current above the vocal cords, to disassociate muscular from vocal effort above the chest muscles.

I have said in "The Voice From a Practical Standpoint," that we have direct control of the articulating organs and of the strong muscles of the throat, but that we have not correct direct control of the vocal muscles. I should have said that after we have mastered pressure and resistance, after we have gained correct breath control and relieved the parts above the organ of sound from performing the office of resistance and control, that then the muscles of the throat, the tongue, the soft palate, the lips, the jaw, etc., become free, flexible, pliable; they then become the servants of our will, ready to respond at once to our desires.

True conditions of tone depend upon right position and attack; now if the true conditions are

maintained, the tone will be continued as started, which means proper tension of the vocal muscles and relaxation of the interfering muscles; result, beautiful, artistic tone. If right conditions are not secured, or are not maintained, after the attack, then the result will be relaxation of the vocal muscles which should be tense, and tension of the interfering muscles which should be relaxed; result, unmusical, inartistic tone. No instrument produces tone upon the principle of relaxation. The loss of correct position and proper tension of the vocal muscles at the start of tone, whereby other muscles are forced into wrong action, is a common fault with singers. Of course in this way right production is impossible.

William L. Tomlins, in his lecture on "The Nature and Influence of Fervent Voice," shows that he fully appreciates the power and influence of the false cords; after speaking of the truth vocal cords, he says:

"Right above here are what are called the false vocal cords, which have not the power of vibrating. If the air is unable to pass between them, it will blow open the two cheeks called ventricles. Physiologists tell us that those ventricles communicate with the brain, and say to it: 'Do you act so we may sing properly': and they communicate, so physiologists say—I have the authority of Charles Lunn, of Europe, for it—with the spinal cord and have for their function the expansion and condensation of air.

"If you should take a cushion of some substance, and put that on

the vocal cords, you would deaden the vibration, just as I by putting my fingers on my lips, stop them from vibrating. But here is an air cushion which presses down and says to the vocal cords, 'You will have to raise a great pressure there; but you need not freeze up into frigidity, and I will squeeze down on you as hard as they do below.' This allows a fluctuating tone. This expanding part says: 'We will expand and control the breath; do you, vocal cords, you, jaw and tongue, you, soft palate and pharynx, go on with your work. We will control the air and you go on with your various duties.' And so with a pressure of fervent tone, which will influence my entire physical nature, I am able to move every other part that should go. I can sing with a power of fervent voice, which will thrill every part of my body; and through that effort, my face will be able to give all the varying expressions of the most subtle emotions. Take that expansion away, and every other part will try and get the control which the throat should have."

In Werner's "Voice Magazine" for 1888 appeared two articles from the pen of Ella Stirling Cummins, one in April, the other in September, setting forth "The Dama Theory of Voice-Cure," "The Theory of the late Luigi Dama of San Francisco."

The articles say in part, with regard to Luigi Dama and his theory:

"He was a man of one idea, but that idea was worth a fortune to him and would be to anyone else who could prove he had rediscovered the secret. This idea was based upon the health-producing effect of the voice used as a means of developing the full power of the lungs by speaking, singing and breathing. . . . He arrested decay of the lungs and restored health in numberless cases by his process of changing the speaking voice from the head or throat, and

placing it in direct contact with the lungs. . . . The true voice is concealed under nearly all the voices so commonly heard. . . . The first thing to be done is to attempt to restore this true voice. . . . . There is but one way that the throat and all its attendant muscles should be shaped, and that is Nature's perfect and original pattern,—round, with no protuberances or hollows. . . . For this perfect and original plan causes the passages of the throat to lead directly and thoroughly to the lungs. The voice which comes from the nose or the throat has no power of magnetism, it must be made near the heart."

Whether too much is claimed for the Dama theory as a curative agency or not, I am not prepared to say. Of one thing, however, I am sure, the secret is not lost so far as it applies to the speaking and singing voice and to strengthening weak throats and lungs. Prof. Dama was no doubt practically right, though theoretically wrong. That he was practically right is evidenced throughout both articles.

When the voice and breath are controlled as set forth in this and preceding articles, such freedom and fullness of throat is felt that one feels as though one's throat were opened clear down to the lungs. I often say to my pupils, open your mouth or your voice down to your lungs, and when the effort or thought is right the sensation is as though there were nothing between the opening of the mouth and the lungs; no contraction, no interference, no wrong points of resistance. That Prof.

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The hard palate has been called the sounding board of the voice. Every vocalist well knows the influence of the resonance of the hard palate, when the action is free and the voice is properly placed, which of course must be well forward in the mouth.

Thus it will be found that the resonance of all the parts and of all the cavities, and the effect upon the voice, will be influenced and modified the one by the others, according as all the conditions of tone production are right or wrong, or approximate the right or wrong.

ARTICLE 9.

Balance the Forces.

Most writers on the voice set forth as part of their creeds or methods, the fact that correct tone production depends upon breath control; they all acknowledge that when there is breath escape to any extent during tone production, pure, beautiful tone is impossible. Yet in the face of their united testimony with regard to the value, importance, and necessity of proper breath control, they have, with a few notable exceptions, utterly

failed to tell how to acquire or master this control, or even what it is.

Owing to the lack of testimony or knowledge as to correct breath control, there is a tendency, on the part of many to take the position that the breath is properly controlled through or by the mental process. The singer is told not to bother himself about respiration, but to be influenced by a proper conception of the phrase or composition he may desire to sing. He is told to study the thought, sentiment, and expression of the phrase or song, and to be influenced by the mental process only, by his conception of the work, by his desire to impart to his hearers its sentiment or passion. In this way, he is told, that he will naturally control the breath, by the mental process, by a proper conception of the composition. This is excellent advice to give to an artist, or even to one who to a certain extent understands and to a certain extent has mastered the mechanical difficulties of the voice; but for a beginner it is of little or no value, and the fact remains that beginners need advice more than artists, and there are many beginners to one artist. Even among those who are singing, many of them are but beginners so far as any definite knowledge of the voice and its proper use and control is concerned.

Mechanical study or movements alone will never make a singer. The mental process alone, or control through sentiment and feeling, will never develop the full powers of the singer. Of the two, however, I am free to confess that if the one must be without the other, I prefer the latter. Either, alone, is but one-sided study and development, and why should voice study at this day and age be one-sided?

A mechanical singer is not to be tolerated; no soul, no feeling, no expression. On the other hand, much teaching is but the study of written works and songs, without the development of the powers which nature has given us to portray feeling, sentiment and passion. In proof of this, witness the many fairly good voices we hear, voices with an intelligent idea of interpretation, but which almost invariably fail at the climax; which, when special demands are made upon them, are never quite equal to the occasion. There are many such in our midst, the result of one-sided study and development. I could name many good, useful singers, for whom nature has done much, but who have just missed becoming great, because they failed to first lay a strong and sure foundation upon which to build.

There are many singing teachers, there are but few voice teachers. Of course the many will

take sides against the few. To be a voice teacher as well as a singing teacher, one must understand the science as well as the art of singing. To be a singing teacher only, one need know but the art of singing. Most singing teachers do not even fully understand the art of singing, because the art is founded upon the science, upon the study and mastery of first principles, of first movements, of complete, correct control. The piano or organ teacher thinks that, of course, he can also teach singing and does teach it. Does he teach his instrumental pupils expression, style and interpretation, before they have, at least to a certain extent, overcome mechanical difficulties, before they have mastered the technique of the keyboard? Certainly not, if he is a competent, conscientious teacher. Why then should he feel and think that he is capable of giving vocal instruction, the technique of which he knows nothing, and the science of which is incomparably greater than that of his own profession?

In order to develop fully all the powers which nature has given us, in order to reach that point where the mental process is of special force and value, we must first study, understand, and to a certain extent master, the mechanical movements. These movements, it is true, can be fully

understood, developed and appreciated, only when studied in connection with correct thought, expression, etc. When the mechanical movements have been understood, and have been studied and mastered under the influence of the mental process, then all idea of method, of self, must be lost in the æsthetic, in the portrayal of the passions.

So long as there are mechanical difficulties in the way, the full expression of feeling and sentiment is impossible. One must learn to think aright, as well as to gain control, hence the development of movement or effort and of thought finally go hand in hand. Everything depends upon right control and freedom of form and action; when these are acquired, the mental process can have full sway. The first study of control and freedom is based upon the management of the forces, motive power and resistance. It should be the aim of the pupil, then, to secure as nearly as possible a condition of equal pressure and resistance at the organ of sound; he must learn to balance the forces, and when that condition is understood, the complete control finally depends upon the influence of correct thought, upon the direction of thought.

The perfect freedom of form and action of all the parts above the organ of sound, we

have found, depends upon the right control of the breath. Nature never intended that man should pinch and contract the mouth and throat in singing. The mouth and throat should have nothing whatever to do with the grip, resistance, or control of voice. That the mouth and throat are used for the purposes of resistance and control, is evidenced from the fact that so many singers cannot control the voice in song and pronounce or articulate distinctly at the same time. Pronunciation, or rather articulation, is sacrificed for the sake of tone, which is evidence of wrong control, and which in right production is entirely unnecessary. When the forces are balanced, the conditions are right; then the singer has the utmost freedom of voice; then he can sing all shades and color of tone upon all vowel sounds, and distinctly articulate all consonantal sounds. Then he can sing from the most somber to the brightest tone, and from the softest to the loudest, with the same ease and freedom. Then it is impossible to sing the hard white tones, the yell so common in the upper chest tones of the untrained tenor voice. To do this, the production must be changed from right to wrong. When the forces are balanced, the upper chest tones in the tenor voice, or in any voice, can be sung as free, as easily, and as open, as any tones in the voice, and

yet be of the desired, of the most beautiful timbre or quality. How many tenors can do this? How many can sing from the loudest to the softest, from the most somber to the brightest tone, on the upper chest voice, without disturbing the conditions or the quality, or without force, pinch or contraction? "Ah, yes," said a tenor, "you must pinch; my teacher says so; but of course you must not pinch so much as ——," naming a well-known opera singer. And so there are degrees of pinching; who is to say how much or how little one should pinch?

When equal pressure and resistance do not prevail, the voice is sure to be pushed, and the pushed voice can never develop true musical tone. In proportion as the voice is pushed, so is its true condition disturbed. When the forces are balanced, that correct natural position or adjustment of all parts is secured which is favorable to every true condition of tone, to the development of the highest musical qualities, the harmonics of the voice.

The importance of this perfect control, this balancing of the forces, cannot be over-estimated; upon it depends the development of all the powers of the singer; upon it depends the development of the artistic nature of the singer.

ARTICLE 10

The Usual Condition of Voice

Writers on the voice well know that there is right tone production as well as wrong tone production. This fact is largely dwelt upon, and yet the reason why one tone is right, why another wrong, is, as a rule, not given. Teachers know that while one tone may be right another is surely wrong, and the pupil is so informed, and yet many teachers fail to show the pupil just why one is right, another wrong. The bare statement of a fact carries with it but little force. Unless the reason why is given, unless the principle of right tone production is explained and understood, the study can be but little more than imitation and experiment. Practice is important, but it must be right practice. Practice without the principle, of correct production explained and understood, is a mere work of chance. Principle alone, of course, will accomplish nothing; but correct principle, understood and applied, will accomplish everything. A little careful practice based upon correct principle is worth infinitely more than days and days of practice without a definite understanding as to the difference between right and wrong production. That much

study is based simply upon hard long practice, is evidenced from the fact that many voices are almost literally worn out, are worn hard and unsympathetic, are in effect old voices when through with what is called a course of voice culture.

Most laryngologists who talk and write so learnedly upon the larynx, and most vocal laryngoscopists who base their teaching principally upon the examination of the throat with the laryngoscope, must surely know that there is good as well as bad tone; yet it is evident that many of them have failed to discover the important fact that the conditions which pevail during right production, and the conditions which prevail during wrong production, are entirely different. They have apparently failed to recognize the fact that under no circumstances can the conditions which produce bad tone, ever produce good tone. This is due to the fact that under laryngoscopic observation absolutely correct conditions, the conditions which produce artistic tone, are physically impossible. I do not wish it to be understood that I condemn the use of the laryngoscope. It is a very valuable discovery and I have used it to great advantage in studying the physiology of the vocal organs; but when it comes to practical teaching, the man who bases his theory or system upon what he sees by the aid of

the laryngoscope will surely go astray himself and lead others with him.

As a rule the voices of little children are right or in a natural condition, while the average adult voice is wrong or in an unnatural condition. Why? Because the majority of voices are used, or rather forced, to do the work demanded of them, by sheer physical muscular force; the result is they become harsh, throaty, breathy, pinched and unnatural. A right system of voice teaching must be a corrective study; must eliminate all error, all false effort, etc., by changing unnatural to natural conditions; by restoring nature's first and simplest movements in tone production, by developing a perfectly free and natural form and action of the entire vocal organization. Thus the common condition of breathy voice, breath escape, must be changed from the attempt to control at the base of the tongue and the soft palate, to the correct and natural control at the organ of sound as set forth in preceding articles. The throaty voice must be changed by overcoming all local throat effort; by relaxing the grip or hold on the throat muscles, and allowing them to become free and flexible, thus changing them from interfering muscles to the free flexible outline of musical form, their natural condition. This can be done, only by setting or resetting the voice at the

organ of sound; by securing natural conditions and control due to the right management of the motive power and resisting force as previously described. The harsh, unmusical, pushed voice must be changed by changing the grip, hold, control or wrong point of resistance from the pillars, the arch of the palate, or the upper throat, to the true point of resistance; thus completely changing the conditions, and relieving the vocal muscles from push and overstrain. In this way all the parts above the organ of sound are allowed to take a free and natural position; in this way the cavities, are filled and rounded out, and the harmonic, instead of the dissonant, elements of the voice are developed.

When owing to contraction or interference, the air is forced out of the cavities and especially the low cavities, then we say the tone runs dry; then the influence of the inflated cavities, in re-inforcing and coloring the tone, is entirely lost; then the tone will be dry, hard and unmusical. In some voices certain parts may be round, free and musical; other parts contracted, harsh and ugly. The air is forced out of the cavities by contraction and distortion, and the tone runs dry. This is very common in going from low or middle to high tones, when correct movements are not understood. The same thing is heard in the use of the vowel sounds; one sound may be beautiful,

the next one as disagreeable as can be imagined; of course the conditions are entirely changed. We say the tone runs dry, or is dry, when the air is forced out of the cavities by wrong effort. When the cavities are contracted the tone is hard, harsh, unsympathetic. When the cavities are inflated the tone is warm, full, soft, sympathetic.

Many pinched, narrowed and unmusical conditions of voice can be changed by overcoming unnatural face effort in singing. All effort to form, shape and contract the lips, which hardens the cheeks and stiffens the lower jaw has a direct influence on the organ of sound and on the throat, and disturbs and defeats all true conditions. All wrong points of resistance due to local face effort must be changed to the true point of resistance, thus allowing the face to be free, flexible and natural, and thus securing true conditions of tone. It is unaccountable that so much unnatural effort of face and lips is constantly resorted to in the attempt to form the vowel sounds.

Wrong conditions of voice are common not only with the untrained, but with many so-called trained singers. With the untrained wrong conditions are the result of misuse, of an entire lack of study or thought. With those who have studied, wrong conditions are the result of a wrong idea of voice control, of form, of effort, etc.

This may be the fault of the teacher; it may be the fault of the pupil. Every teacher will have some pupils who never can and who never will understand him, it matters not how plain and definite he may be. If the singer has developed wrong conditions, in order to succeed a complete change must take place. He must be made to know, to see, to feel, to think differently. His ideas of voice control and form must be changed by changing his direction of thought and of effort. The fundamental principles upon which all correct study is based must be made plain to him; and this to many who have studied, as it were blindly, is a perfect revelation. The pupil must be made to know and feel that over against all wrong conditions, there is but one true condition of voice which is based upon scientific principles, and which should be his constant aim to understand and master.

CHAPTER II.

INTELLECTUAL.

ARTICLE II.

Influence of the Mind, or Will-Power.

Man has a dual nature; mind and body, spiritual and material, soul and substance. Either the body, the material, rules the mind, the soul; or the mind or will-power predominates the body, the physical force. If the former, then the man will be coarse, unfeeling, and often brutal. If the mind, the intellectual force, rules the physical, then the man will be kind, refined, intelligent, sympathetic, and yet may be endowed with, or may have developed the greatest physical powers. The preceding chapter is devoted largely to the mechanical movements in voice training, voice control and voice development. In this chapter we shall consider the intellectual, or the mental process. As before stated, it is impossible to entirely separate the two, even if it were

desirable to do so. Here we shall consider the influence of the mind or will in controlling and developing the voice. This second stage of study is important, as it develops more fully, not only the mechanical or physical forces, but the intellectual or mental powers as well.

The mind or will-power is the great controlling force or influence in the training of the voice. It is a power for evil or for good, according as it is correctly or incorrectly applied. If the teacher or pupil has not learned to think aright, then it is easy to see how the will-force may be in the direction of the wrong. The pupil must be taught to think aright and finally to produce tone by will-power, instead of local muscular effort. By constantly willing to do a thing, we gain complete control of a movement, and correct movement is life. A constantly recurring movement will develop an automatic action, either to be desired or dreaded as it may be right or wrong. It should be the aim of the pupil to develop a correct automatic action of all the parts of the voice producing apparatus; an action which is the result of the influence of the mind or will-power, the result of correct thought.

So long as there are mechanical difficulties to overcome; so long as there is interference which prevents a free and natural form and action of

voice, so long will it be impossible to fully develop sympathetic feeling and expression, or the æsthetic nature of man. The application of will-force, right or wrong, is according to the training, physical and mental, which the pupil or singer has received. Hence the importance of first knowing or fully understanding all the mechanical movements of the voice over which we have correct direct control. Hence the greater importance of learning to control these movements and all movements by the influence of the mind or will-power, correct thought.

"Knowledge is power;" to be a power for good it must be definite and complete knowledge. The pupil should have knowledge not only of the right, but of the wrong as well. How can the pupil surely avoid the wrong unless he knows it? Hence the wrong should be made plain in order that the pupil may know and avoid it; and the right should be made plain in order that the pupil may know, develop and apply it. Nothing is so strong or so definite in voice training as the study of contrasts. Set the right over against the wrong; make the pupil know the right from the wrong; why right, why wrong; and the impression made will be doubly deep, and the knowledge gained many times more definite and sure. I have found the study of contrasts to be of spe-

cial value. I first make the pupil produce tone as nearly right as possible. I then have him sing a tone right and the same tone wrong, and study or analyze the difference between right and wrong production; the difference in effort, form, placing, sensation and result. In this way, right and wrong production and the differences are more fully understood, and the pupil is the better able to avoid the wrong and fix the right.

All study should but lead to that development and control which finally enables the singer to avoid conscious local effort, to forget self, in giving full sway to sentiment, feeling, expression, to the portrayal of the passions. The music of a song or ballad is of secondary importance; it is simply the vehicle upon which the words are carried that express the sentiment and thought which quicken the brain and electrify the heart and soul of the hearer. If the music is not wedded to the words or the words to the music, of course the one interferes with the other and a perfect performance is impossible. If the singer has not fully mastered the music, or is not able to pronounce the words distinctly, then the most delightful effect due to the expression of feeling and sentiment must be wanting. If there are mechanical or intellectual difficulties in the way; if the singer is not quite equal to the music, or has not a proper conception

of the song, then the desired result cannot be expected. It is only after all mechanical movements are understood and are controlled by the mental process, the influence of the mind, that the higher, the æsthetic nature of the singer, can be fully developed. Then, even though his powers be limited, he can make his audience forget every thing except the feeling, the sentiment, the passion, which is the perfection of his art; then, when he can make his hearers feel, he will have started upon or entered into the higher artistic life.

"It is a recognized law that the mind and body act and react upon each other. After the first step in tuition—that of the fixation of attention—is secured, we have to consider this very action between mind and body, and see how it will aid or how it will mar progress."

With this law before us, the action and reaction of mind and body, the one upon the other, let us see how it can be made to serve our purposes in voice training. The aim of the pupil should be to first learn what the correct mechanical movements of voice training are, over which we have correct direct control. He then should learn to understand them, their location, their direction of movement or effort, and their influence on the voice. He also should learn of the movements,

the form and the action of voice, over which we have not correct direct control. During this study of the mechanical movements of voice the mind is subservient to the body. By the aid of the mind we solve the problem of the mechanical movements of the voice. We study action more than effect. The way we do at the start is of far more importance than the result. Soon, however, if the pupil is properly guided, a longing for something better, for something higher, than mere muscular action will be felt. Then the reaction will begin. Slowly at first, but in the course of time it will be found that there is more mind than muscle influence or control in the tone. Then it will be found that the influence of the mind predominates or controls the muscular action. The result is then studied or considered more than the way. Thus we have the combined action of muscle and mind with the mind in the ascendency. This must go on and up until we have the combined action of muscle, mind and soul, with the soul, true feeling, predominating and ruling over all.

In order to strengthen the influence of mind over muscle, the pupil should be taught to give expression to something higher than mere tone. Every exercise, if but a single tone or group of vowels, a scale or an arpeggio, should be the

result of thought; should be thought expressed by or through the tone of the voice. The pupil should be taught to think out every tone, every exercise, every study; to have the model in the mind and produce it by the voice. Correct tone can be the result of correct thought only. If the mental impression or picture is right, the tone will be right, or will come right in time. It must be in the mind before it can always and surely come in the voice. Study the mechanical and the intellectual combined. Be sure the mechanical movement is right, then control it by will-power, until it becomes a servant to the will, until it becomes automatic. Sensations mislead. No man can be a good judge of his own voice. Many singers do the very things they so severely condemn in others; hence, do not be satisfied short of perfect freedom, fullness, beauty and power. Sing sentences as though before an audience, thus gaining correct control and action by giving expression to the thought contained in the sentence. Cultivate a proper disposition, temper and character, all of which have a wonderful influence on the action and quality of the voice. Form the habit of standing well, as correct position greatly aids in securing right adjustment and support. Let everything which is done be the result of thought. Form the habit of think-

ing correctly; it will influence the voice for good throughout life. Take an ordinary vocalise, such as are usually used for the development of flexibility, execution, etc. ; sing it with the object of giving expression to thought or sentiment for which one must draw upon the imagination; it is wonderful how it will change and influence the quality and beauty of the voice.

The pianist first studies the position and action of his hands and fingers upon the key-board—the mechanical process. Then this action is further developed by his efforts to perfect his exercises and scales—the mental process. After he has passed these two stages of study, and only then, is he prepared for the higher study, interpretation. So with the singer; he must pass through the three stages of study before he can be called an artist. He must study and master the first two before he can fully develop his higher nature. Of these three stages of study the student should bear in mind that the intellectual, or mental process, is by no means the least important.

ARTICLE 12.

Direction of Thought.

The way or manner in which the pupil is taught to think largely settles the question as to his success or failure. In order to think aright he must know what to think and how to think it. Hence the importance of a right direction of thought. It is easy to see how, in the first stages of study, much depends upon the teacher, which refutes the argument that any teacher is good enough for beginners. The start is the most important and most difficult of all stages of study. If the start is right, success is almost assured; if wrong, bad habits are formed and wrong ideas are developed, all of which have to be changed and overcome in some way, some how, or by some one, before complete success can be expected.

There are many teachers who are very successful in teaching style and interpretation, but who know little or nothing of the science of voice training; such, of course, are not the teachers for the beginner. The teacher for the beginner must know more than the art of singing; he must know the science of voice culture as well. To start wrong is a waste of time and money. Every teacher well knows that it is more difficult to undo

acquired defects than it is to correctly train the voice from the very start. Then, too, much is often lost to the voice by wrong effort, in the way of beauty and power, that can never be entirely regained.

The impression prevails with many that it does not require much thought to learn to sing. They imagine they can go to a teacher, have him tell them and show them how, and that in time they can sing without giving the matter much thought or study. A young lady once said to me, "I do not care how much it costs me, I am going to learn to sing; but I do not want to have to think so much about it." I said, "My dear young lady, if you imagine that your money can ever make you sing without thought or effort on your part, you are certainly bringing it to the wrong place." Brains are as important and necessary in the science of voice and the art of song as in any other known science or art. To whatever point we direct the mind, or apply the will-force, there will the greatest effort be made; and in whatever way we direct or apply it, right or wrong, so will not only the effort be right or wrong, but also the result. Hence the importance of learning what to think and how to think; hence the importance of a right direction of thought.

There is and can be but one correct way to pro-

duce tone. The conditions which produce right or artistic tone are the same in all voices, in all languages, in all nationalities. There may be many ways or methods to study, develop and master right conditions, but the conditions must be right or the tone cannot possibly be right. The fact that the conditions which produce right and wrong tone, good and bad tone, are altogether different, does not as a rule receive proper consideration at the hands of singers. Right and wrong conditions must be understood in order to be controlled. Right conditions are natural and definite. There are singers for whom Nature has done much, who sing right without knowing how or why; but they are rare. The right must be made definite for the many for whom Nature has not done so much, or with whom natural conditions have been disturbed by the circumstances of life.

As we have learned, right conditions in tone production are the result of right breath control; not merely inspiration, but the control and application of the rightly taken breath to producing and sustaining tone. In order to master this breath control, the singer must understand the correct movements of all the parts, and the control of the forces as before described. He must understand them, and so control them by thought

or will-power, that all effort finally becomes automatic; finally becomes the result of correct thought. Let us see what some of the wrong conditions of tone are as compared with the right, and how to think in order to change the conditions. This is so gigantic a subject that it is impossible to treat it exhaustively in so small a work. The points given, however, I think will be sufficient to convince all, who are willing to be convinced, of the definiteness of true conditions and of the importance of the right direction of thought.

Compare the pushed tone with the tone that is properly placed, poised, or balanced. The pushed tone is the result of a wrong direction of effort, which is due to a wrong idea of tone production, to a wrong direction of thought.

There is one important point that singers as a rule lose sight of, or do not seem to understand. That point is, that the air current, or the direction of the air current, is one thing; and the muscular effort or resistance, or the direction of muscular effort, is altogether another thing. If in the production of tone the muscular effort follows the direction of the air current, then the conditions cannot possibly be right, then the tone or the voice will be pushed.

The pushed voice, the most common of all

wrong conditions, is largely due to the fact that singers are made to think that they must place the voice forward, they must send it out; this is impressed upon them until their every thought and effort is forward. In their desire to send the air current forward and out, every muscular effort is made in the same direction, with the result that the organ of sound is pushed out of proper adjustment, due to the fact that there is no correct resistance to counteract the pressure, and of course true conditions cannot prevail. The same is true with many when power is wanted. We hear many voices that are at least pleasant on soft and medium tone, but when full power is wanted the effort is simply increased pressure and push; result, harsh, breathy, disagreeable noise. When the organ of sound is thus pushed, wrong points of resistance, as before described, are forced into action, to support the voice and prevent strain. These wrong points of resistance then become interfering and disturbing points, affecting the quality, color, and power of the tone; the tone will then be open, hard and disagreeable, or closed and breathy. The pushed tone under no circumstances can be musical or sympathetic.

The tone, of course, must come to the front. There is, however, a right way to place and re-in-

force the tone, as well as many wrong ways to try to do it. In order to do it aright, the pupil must be made to think aright; his direction of thought must be changed before his direction of effort can be changed; this is the only way in which it is possible to disassociate muscular from vocal effort. When the conditions are right, when the resistance equals the pressure, when the breath is controlled by the approximation of the breath bands, then there will be no interference above the organ of sound; then the voice will surely and always come to the front; it is its proper level, its true and natural placing. In order to secure this freedom and placing, the pupil must be taught to think the air current in one direction, and the muscular effort or resistance in the opposite direction, just as the pianist trains his one hand to play up and the other down the key-board at the same time. In the course of time all effort must become automatic, merely the result of correct thought. In order that the resistance may equal the pressure, the effort must be in an opposite direction from that of the air current; hence, in singing up, or out, the pupil must be taught to think back and down, so far as muscular effort goes. There must be no local throat effort of pharynx or larynx. The backward pressure or resistance must be automatic;

must be the result of a right direction of thought; must be controlled by the chest and chest muscles, as before described.

Many singers and teachers recognize the importance of this backward pressure or resistance, even though they do not know what it is, or how or why it affects the voice. They say you must sing as though you were singing in, instead of out; that you must imagine you are drawing the air current in from the outside of the mouth, instead of forcing it out. This is simply changing the direction of thought, which in time surely changes the direction of effort. In this way pupils who do not understand at all the principle involved, often secure right conditions and the desired placing, which goes to prove that if the conditions are right the tone will be correctly placed at all times. Correct placing is important and must be secured, but it depends upon freedom of form and action. Sometimes by a study of placing, by thinking the voice to the front, not pushing, we are enabled to relax the upper throat, to secure right conditions by a passive condition of non-interference above the organ of sound. When the singer imagines he sings in, instead of out, he of course changes his direction of thought, and in course of time his direction of effort. If he manages the motive power well, he may in the

course of time in this way set the voice, control the exit of the air, inflate the cavities, relax the throat, and thus develop beautiful tone.

It is a common thing to hear voices that are quite good on the middle and low tones, but altogether wrong on the higher tones. Thus on an arpeggio sung within the ordinary compass of the voice, one, three, and five of the arpeggio may be satisfactory and alike, while eight will be an entirely different production, and of course different quality and different effect; so different that the high tone often sounds as though it belonged to another voice. The conditions which prevailed on the low and middle tones are completely changed on the high tone; otherwise the style and quality of the tone would not have changed. It is, or should be, the aim of every singer to develop a perfectly even voice throughout the entire compass; the same quality and condition should prevail from the lowest to the highest tone. Of course the singer must recognize and equalize the registers; nothing is of more importance; but the equalization of the registers depends upon the ability to secure and maintain correct conditions throughout. The chest, medium, and head tones, will and must have their own form, placing, and quality, and yet be so equalized that they sound as one voice

throughout. If the conditions which prevailed on the low tones are changed on the high tones, the result cannot possibly be the same. If the control, the resistance and the inflation [re-inforcement] are right on the low tones, they must be maintained on the high tone, or the result cannot possibly be right. It is, as a rule, more difficult to secure and maintain right conditions on the high tones, than on the middle and low tones. Right conditions mean a perfect balancing of the forces, and as resistance is the weak point with the majority of singers, it, of course, requires time to properly develop the high tones.

In ascending, if the direction of thought is up only, if the tendency is to reach for the tone, as is so common, then the direction of effort will be up also; then true conditions on the high tones are impossible. Do not confound the direction of the air current with the direction of the muscular effort or resistance. This is the rock upon which many are stranded, the barrier which many never surmount, because they never learn to think aright.

In singing up, the mouth must be opened a little, the form elongated and the tone placed up and forward. This is the direction of the air current. In singing up, as the pressure is increased, the resistance must be increased in proportion. Thus,

instead of pushing up and following the tone with the effort, the position and condition of the first tone must be maintained so far as control and resistance are concerned. By increasing the resistance as the pressure is increased, the singer constantly places himself on a level with the tone, it matters not how high it may be; so that tones produced in this way, though they may be the highest in the voice, sound free and easy, and of the right color or quality. To place one's self on a level with the tone, means to strengthen and balance the forces in proportion to the pitch. For the higher tones, this requires time and study. Right production, we have found, is due to the control of the air current by the approximation of the breath bands and the inflation of the cavities. These conditions must prevail on the high tones as well as on the low tones. If, in ascending, the effort follows the tone, due to a wrong direction of thought, then the control is lost at the true point of resistance, the breath bands, and instantly some other wrong point of resistance is forced into action to control and support the tone. This on high tones is usually a contraction of the pillars of the fauces, or of the arch of the palate. Hence the tone is either pinched, hard and white, or veiled, breathy, and devoid of all carrying qualities.

In order that right conditions, secured on the low tone, may be maintained on the high tone in ascending, the direction of thought, so far as the effort is concerned, must be the opposite from the direction of the tone or air current. As the tone ascends, the original position and condition of control must be maintained. To do this, the direction of thought must be down instead of up. The tone goes up and forward. The direction of thought must be down and backward, in order to balance the forces and maintain true conditions. Hence we say, sing up, think down. There must be no local force or throat effort. Any effort which shows upon the face or the muscles of the throat is wrong. The action must be automatic, the result of correct thought; must be controlled by the proper management of the motive power and resisting force.

This may appear to involve the much mooted question of a fixed or a movable larynx. It does not in reality, and yet this is no doubt a good point to touch briefly upon this important question, as the right management and control of the larynx is almost entirely the result of right thought. The man who says to the larynx you must stay at one fixed point, and that often the lowest, under all circumstances, delegates to himself the authority to antagonize all true acoustic condi-

tions, and to reverse the laws of nature. The man who says to the larynx, you must ascend when the voice or the tone ascends, and you must descend when the voice descends at all times, virtually says: "I am greater than the Power that created you, and my rules are greater than nature's laws or rules, made to govern you by your Creator."

There is a school or method, adopted by many, which claims that the low fixed larynx is the only proper position; result, muscular, hard, unsympathetic voices; but it does develop noise, a dangerous position, as is proven by many ruined voices. Another school claims that the larynx must go up in singing up, and down in singing down. I know of teachers who place their fingers upon the larynx and compel the pupil to push it up in ascending and to force in down in descending, thus making a sort of a human trombone of the throat. If pupils succeed in this way, it is not on account of the teaching, but in spite of it; not because they succeed in thus managing the throat, but because they fail to manage it in this way so soon as the fingers are removed.

Why should there be so much said about the larynx in singing? Nature never intended that man should manage the position and movements of the larynx by a direct local effort, any more

than she intended that he should always by a conscious local effort, approximate the vocal cords when he desired to sing or speak.

It is true, the larynx does go up and it does go down in correct singing, and at times it is in a fixed firm position, not as the result of local control, but as the result of thought or effect. The correct movements and position of the larynx in the properly managed voice depend entirely upon the thought, upon the effect which the singer may desire to produce.

If the desire is to sing from a full, low, deep, rich tone to a full, high, deep rich tone, the larynx must not go up. If it does, the high tone will not be the same production as the low. The character and quality will be entirely changed. Deep here refers to form and inflation, and not to pitch. If the desire is to sing from a full low tone to a soft high tone, a soft tone of breadth, depth and firmness, the larynx must not go up. If the desire is to sing from a soft, easy low tone of ordinary form to a full, deep high tone, the larynx must not go up, but must go down; otherwise the performance will be a failure. If the desire is to sing from a low tone of ordinary form, power aud color, to a high tone of the same character, then the larynx will naturally rise. If the desire is to sing from a low full tone to a soft high tone

of ordinary form and color, then the larynx will naturally rise.

If the desire is to sing from a high, full, deep, rich tone to a low tone of ordinary form and power, then the larynx will not descend, but may ascend a little, which will depend upon its position on the high tone. If the desire is to sing from a high tone of ordinary form and power to a low tone of the same character, then the larnyx will naturally descend.

So one might multiply cases indefinitely. The above, however, are sufficient to show that the movements and position of the larynx depend entirely upon the effect which it may be desired to produce; upon the form, the fullness, the depth, the color, the character of the tone. The singer who cannot in this way indirectly manage the larynx, manage it through the study of effects, is a long way from being an artist. By direct local effort, such management is physically impossible: it forces into action interfering muscles and disturbs or prevents all true conditions of voice. A right management of the larynx depends upon right thought. I scarcely ever refer to the larynx in teaching. If I find the effort is wrong, I conclude that the thought is wrong; so instead of calling attention to the effort I call attention to the result. I strive to make the pupil see and

feel the difference between the result of his efforts and the right result; and here is where precept and example combined are so important, so powerful. Hence I strive to control the direction of thought by precept and example. And when the mental impression, the mental picture, is correct, right effort and conditions will surely follow.

This principle of teaching, this study of effects, is of great value, especially in equalizing the registers, in the study of the vowel sounds, and in the control of the tongue, as well as of the larynx. All trouble of the tongue is simply the result of a cause and not the cause itself. Discover if possible what the cause is; remove the cause by right management of the controlling forces, whereby an automatic action of all parts above the organ of sound is secured, and by the study of right effects, the trouble of the tongue will disappear without having mentioned the word tongue.

All wrong effort in the use of the voice is simply the result of wrong thought. The jaw is firmly set and the mouth refuses to open. The singer knows he must have grip or control; hence he places it upon the jaw instead of upon the muscles of the body, where it belongs; he thinks wrong. Again, the muscles of the throat are

griped and contracted. It is found to be easier to get contraction of the throat muscles in the effort to produce and sustain tone, than relaxation. The direction of thought is wrong. Place all effort on the muscles of the body, as before described, and form the habit of thinking perfect freedom of form and action above the chest. When the mental picture is right the effort will surely come right in time. Throat suction is often resorted to in breathing; an ugly, disagreeable habit, prevalent among the best of singers, but entirely unnecessary—the result of wrong thought. Place the mind upon the action of the diaphragm in breath taking, and let the throat be passive, be in repose, so far as effort is concerned. Thus fault after fault may be traced to thinking wrong, or to the fact that no thought whatever is given to the manner of singing. To change a fault, the pupil must be made to see not only that he is wrong, that he is thinking wrong, but something definite must be given him, in the direction of the right, to think about and strive for instead; thus completely changing his direction of thought and of effort.

On page 90 of "The Hygiene of the Vocal Organs," by Morell Mackenzie, may be found the following: "Another matter as to which

there is perfect unanimity is that the air-blast is much less strong in head than in chest production. Every singer knows by his own experience that it is difficult to render a high chest note piano, and that the higher the pitch the less easy it becomes. It is, on the other hand, almost impossible to sing a true falsetto note forte." The above is true, no doubt, considered from the standpoint of wrong production. It is especially true under laryngoscopic observation, which always means bad production.

Upon these important points, the singer, if wrong, must be made to think differently. If the conditions are right, if the control of the air current is right, if the support is right, if the tone is right, then the air-blast is much stronger on high or head tones than on low or chest tones of the same power or fullness. If the conditions are right, then it is as easy to sing high chest tones, and the very highest chest tones, piano, as it is the middle or low ones. I know this is contrary to the manner in which they are usually sung [bad production], but that it is so, is easily to be proven. On the other hand, it is by no means impossible to sing the high tones forte, the tones that Dr. Mackenzie calls the true falsetto notes. A wrong idea prevails with regard to the falsetto tones: so soon as firmness and ring are

put into them, they are said to be chest tones, which is of course a very serious mistake.

Article 13.

Influence of the Resonance Cavities.

The science of voice culture, or of voice development, may be said to be largely a question or a study of re-inforcement—not the re-inforcement of muscular development and muscular vibration only, but the re-inforcement of color, quality and character of tone, the result of the right use and influence of the resonance cavities of the voice. This higher view of the question of re-inforcement is in reality of much greater importance than the question of muscular development, for it is more largely the result of the influence of the mind, or will-power, the result of correct thought. That this study of re-inforcement is not generally considered, is evident from the fact that most singers depend merely upon different degrees or shades of power to vary the effect,—muscular expression. The higher form of expression, tone color, or the influence of the cavities, is all too little understood or applied.

The initial tone, the tone produced by the vibration of the vocal cords, of itself has but little

power or beauty, but depends upon the influence of sounding boards, resonance cavities, mind and soul, for its power, beauty, color, quality, and character. If this point is carefully considered, the singer must realize the vast importance of a thorough knowledge and mastery of all the re-inforcing powers which nature has so lavishly bestowed upon him. It should teach us all to look upon the science of voice as something more than mere muscular development. It should lead us to study and consider the divine art from a much higher plane or level than that from which most people view it.

The resonance cavities here referred to, which influence or modify the color, character and power of the tone, are the ventricles of the larynx, the pharynx, or lower throat, the upper throat, the nasal cavities and the mouth. The influence of the chest and of the sounding boards has been considered in preceding articles. We will commence with the mouth, the most forward and open cavity, and consider them in turn as we go deeper into the question.

As a rule, voices should first be trained upon what is called "open, or clear timbre." The tone is placed well forward in the mouth, and takes its color or character mostly from the cavity of the mouth. It is modified or colored but little by the

lower or deeper cavities of the voice; hence it is called clear timbre, white tone. This is the lightest and easiest of all tones to produce. It requires the least pressure, hence the least resistance. It is largely surface tone, hence has less of thought, feeling and soul than other qualities of tone. It expresses properly, lightness, gladness, brightness, mirth, frivolity, and all ordinary commonplace thought, feeling and sentiment. It is easy to see then why, as a rule, it is best as first study for beginners, or for those whose powers are undeveloped. But alas! because the clear timbre is easy to produce and manage, the impression prevails with many that it is the tone of voice to cultivate above all others. It is therefore used by such continually, and under circumstances in which it is entirely out of place. This accounts for many clear, bright voices which are entirely devoid of soul or feeling.

It should be remembered that the tone here referred to, the clear timbre, is not a tone entirely devoid of color. It must be the result of right conditions at the organ of sound, of the conditions as set forth and explained in preceding articles. The true point of resistance must prevail. If not, the wrong point of resistance will most likely be found to be at the fauces, to be the result of a contraction of the pillars of the

fauces. Under such circumstances, true conditions are impossible, and the tone will be out of the mouth, instead of in the mouth. The tone will then be hard, harsh, white, entirely devoid of color and musical effect. And yet the fact remains that many mistake this hard, white tone, this wrong production, for the clear timbre of the voice, which accounts for the fact that many yell who think they sing; which accounts for many ruined voices. If they understood how to balance the forces, how to control the exit of the air at the true point of resistance, how to avoid all direct local effort above the chest, then the danger of strain from wrong production would be avoided. Then harsh white tone, sung out of the mouth, would not be the result, for it is impossible to sing out of the mouth so long as true conditions prevail. To produce unmusical effects the conditions must be changed.

The nasal cavities have a much greater influence on the power and quality of the voice than is generally supposed. They aid greatly in augmenting the power and clear ringing quality of the voice. It is highly important that the nasal cavities should be open, free and healthy. When they are free and healthy, the air contained in them, by sympathetic vibration, greatly increases the power and beauty of the initial tone. When diseased or

closed by colds or catarrh, the bane of singers, their re-inforcing power is not only greatly diminished, but its character is completely changed; it loses its clear ringing quality, and colors the voice with that dead, heavy sound so common with singers who have severe colds in the head, or who suffer from catarrhal trouble. Not only do they then lose their own power, but they deaden the vibrations of the bones of the head, which in themselves greatly augment the voice.

Nasal tones are usually the result of a drooping of the soft palate, whereby the air current finds its way into the nasal cavities instead of coming forward into the mouth. The tone than is colored almost entirely by the influence of the nasal cavities. If there is no physical defect, no disease, the nasal tint can be eliminated by securing a correct form and action of the soft palate and by placing the tone well forward in the mouth. The singer has very little direct control over the nasal cavities, except to keep them free, open and healthy, and to allow them to exert their greatest influence by correctly managing the forces over which he has direct control.

The upper throat is the cavity which is bounded by the base of the tongue, the arch of the soft palate, the pillars of the fauces and the tonsils, and the back wall of the throat. This cavity exerts

a wonderful influence on the tone. It is constantly changing in size, form and conditions, according to the vowel sound used, the word, or the effect it may be desired to produce. The boundary lines of this cavity, the base of the tongue, the arch of the soft palate, and the pillars of the fauces, are wonderfully active agents in modifying the voice and in producing and changing effects. Hence it is important that the singer should have absolute control over the movements of all these parts. The parts themselves must become servants to his will, and not hindrances or obstacles in his way. This control can never be the result of local effort, but must be automatic; must be the result of correct thought. If true conditions prevail at the organ of sound, then these parts can be controlled entirely by the influence of the mind or will-power.

When the pupil has to a certain extent mastered the motive power and the resisting force; when he can secure and maintain true conditions on the clear timbre, then it is in order to consider something more serious; then it is time to re-inforce and color the tone by the influence of the resonance of the upper throat. The tone must be placed forward in the mouth on the hard palate, the same as for the clear timbre, but dignity, depth, and character are added to the tone by the influence of the resonance of the upper throat. The tone, under prop-

er conditions, is not dark or somber, nor shallow or light, but is full, clear, rich and dignified. It is serious and dignified, but not sad or somber. It is the tone which is used on all occasions when extreme effects are not desired. It is the tone best adapted for ordinary church and oratorio singing and unimpassioned song singing. It is mastered and controlled by the study of effect only, and not local effort. It expresses more depth of feeling than the more shallow clear timbre; more warmth of color, more heart, more soul. . . It of course requires more strength, more pressure and resistance, than the lighter tone; but it draws out and develops more of the powers of the singer. It strengthens more, and in the course of time as the singer gains strength, becomes as easy as the lighter tone, and much more delightful.

The influence of the resonance cavity, which should be next added to the voice after the upper throat is mastered, is that of the lower throat, or pharynx. The influence of this cavity for good or evil is very great. In preceding articles, we learned of the influence of the throat on the color or quality of the voice when true conditions were wanting, or when wrong conditions, wrong points of resistance, prevailed. The object here is to consider the influence of the cavities more particularly under true conditions.

To add to the ordinary full tone of the voice the influence of the deep cavity of the lower throat, means to greatly increase its power, beauty, depth, breadth, richness, intensity, sadness, soulfulness, or dramatic force, at the will of the singer. All the deep, somber, sad, heart-breaking effects are dependent upon the low cavities of the voice. All the impassioned, soulful, dramatic effects are largely dependent upon the deep cavities of the voice. The control and influence of the low cavities depend absolutely upon true conditions at the organ of sound. There must be no local effort of throat muscles; no local effort to broaden, deepen or form the throat. The throat muscles must be passive and pliable, simply an outline of the form or effect it may be desired to produce. Unless true conditions prevail, it is impossible to thus control the throat muscles. Hence the importance of mastering true conditions.

If the desire is to produce full, rich, ringing effect, then the tone must be placed well forward on the hard palate. We then have the ringing effect of the forward placing, combined with the fullness and color of the low cavities, and we get what may be called the rich red of the voice; we get then the most beautiful, the warmest, richest effect which the human voice can produce. This

effect can be maintained on all degrees and shades of power, from the loudest to the softest tone. If the desire is to produce sad, somber effects only, then the tone must not be placed so far forward. The ringing effect of the forward placing is then lost, and the deep, sad, somber effect of the low cavities alone is felt. He only can be considered a true artist who can produce all shades and effects of tone by skillful combinations of the tone color of the different resonance cavities. To do this, means absolute freedom of form and action of all the parts above the chest, which freedom is entirely dependent upon true conditions of tone production. All, it must be remembered, is but the result of the study of effect, the result of correct thought.

Then there is to be considered in this connection, the cavities or ventricles of the larynx; cavities which in a way exert a greater influence on the voice than all others, because the influence of all others, to a great extent, is dependent upon right conditions at these. The inflation and influence of these cavities depend upon the proper control of the motive power and resisting force, upon the approximation of the breath bands and the control of the exit of the air at the organ of sound. In short, their influence depends upon true conditions at the organ of sound, as we have be-

fore learned; and when true conditions prevail, the influence of all the cavities is controlled by the will or mind of the singer. The cavities of the larynx influence and color every tone, bright, medium or dark; the darker and deeper, the greater the influence. The more the tone is influenced by the low cavities, the richer it becomes if correct placing is maintained. The larger the cavities of the larynx, the more beautiful, rich and full the voice. The deep, rich tone is the tone to be desired —the deep tone with the ring of the forward placing. Almost all harsh, disagreeable tone is the result of the influence of the high cavities only, and of high, wrong points of resistance.

The deep tone develops all the powers of the singer, the powers of body, mind and soul. Open deep. Open as though there was nothing between the opening of the mouth and the lungs. Sing as though the voice came from the heart, from the very soul.

Article 14.

Tone Color.

There is no language in the world so expressive, so forcible, so intense, as the language of the emotions. Every shade and condition of feeling and emotion can be expressed by the face,

the eyes, the body, and the tone of the voice, without the aid of words. Cicero declared that, with the features of the face, the actions of the body, and the voice, all the sentiments of the soul could be expressed. The quality or color of the tone of the voice is more powerful, more persuasive, than music or words. How often the character of the tone and the expression of the face give the lie to the spoken words! How often the singer unconsciously in song speaks one sentiment and gives expression to feeling and emotion entirely foreign to the sentiment of the words! Such singing is due to the fact that there are many things which the singer does not know or cannot control.

"There is nothing in nature that arouses our attention or impresses our feelings more quickly than a sound; whether it be the tone of sorrow or the note of joy." "The tones of love and nature are natural inflections of the voice, intelligible in every language, and understood by the lowest of our species; it requires not the aid of words to express them. There is a lightness of voice for the ecstacy of joy, as well as a depressed and weighty tone for that of grief. The composer takes care to interweave these expressions, by which he heightens the force of his melody; and if the singer is sensible of them, he will skillfully

blend them in whatever he performs. The application of these instinctive tones may be compared to those colors in a picture by which the painter gives warmth to his subject, and which may be termed the coloring of the musical art. Nor can we have these expressions at command, unless we give ourselves up to that state of feeling which will enable us to express them."* Nor can we give ourselves up to that state of feeling unless we have mastered all mechanical difficulties; unless the action of all the parts has become automatic; unless everything is controlled by the mind, or will-power. Then, and then only, can we under all circumstances, give ourselves up to the proper state of feeling. Then we can give expression to every thought, feeling and emotion.

"The tone color of any sound is that peculiarity which distinguishes it from another of the same pitch and intensity. The cause of the tone color, or quality of a sound, is the number and prominence of the overtones, or harmonics, which are combined with the fundamental, or pitch-determining tone." The placing and form have much to do in developing the harmonics, in determining the character or color of the tone. The various vowel sounds may be said to be differ-

* Gardner's "Music of Nature."

ences in tone color due to differences in form and placing. In this article the color and character of tone is treated in relation to the expression of the emotions and the portrayal of the passions.

The human voice is the only instrument known which possesses to any great extent the power to vary the color, character, and quality of the tone. All other instruments depend almost entirely upon the variation of tempo and the degree of power for varying the expression and effect. In this respect many singers are mere machines. They depend entirely upon the variation in tempo and power to vary the expression. The human voice, however, is capable of much greater variety and much higher forms of expression than any instrument made by hands. It is capable of much higher forms of expression than many singers seem to be aware of. It is strange that the power of tone color is not more generally understood and practically applied by vocalists. The highest known art in the science of voice is the expression of tone color. The voice should be able to portray all sentiment, feeling and passion by the tone color alone. "And yet, alas! how often one hears a singer whose opening ballad perhaps, one has listened to with whole-souled enjoyment in the clear liquid notes, begin

on the next number, say Beethoven's "Ah Perfido," with exactly the same pure, sweet tone that a few moments before very properly described the happy stroll of a village maiden—a difference in power, emphasis and tempo being the only means put in use to express a change to the indignant despair of Beethoven's tragic recitative." The color and character of the tone should always change with a change of sense and sentiment. A minor strain should seldom be sung with the same tone of voice with which one would properly sing a major strain. In changing from a major to a minor movement, or from a bright to a somber effect, the change should not be one of harmony, tempo, power and accent only, but the greatest effect or change should be produced by a proper change in the color and character of the tone.

The power of tone color depends, first, upon the mastery of all mechanical difficulties, upon a perfectly free and automatic action of all the parts above the chest, controlled by will-power; then upon the heart and soul of the singer. Some natures are more emotional than others. With some, we have simply to free them of all mechanical and physical difficulties and obstacles, and the heart and soul will find expression in the tone of the voice. With others, the emotional,

the feeling has to be drawn out and developed. It is astonishing to what extent this can be done even with the most machine-like singers, after the voice is under proper control.

This subject of tone color is so great that it is impossible to treat it exhaustively in so small a work as this; we can but give the general divisions of expression and color, with brief explanations and a few examples. This we do in the hope that it may lead some to think and study in the right direction.

The clear timbre, the tone that is placed forward in the mouth, that takes its color largely from the high forward cavities, particularly from the mouth, is favorable to the expression of all light, bright, gay, joyous thought and feeling; to the expression of sentiment which requires no depth or intensity of feeling; to the expression of sentiment which may be said to be on the surface. This light, bright voice is all right in its place, if properly produced; but it must be musical; it must not be harsh, white and disagreeable. It is, however, all wrong in the singing of a passionate love song, or a sacred solo which is intended to portray deep religious feeling. And yet how often one hears just such music sung with a tone of voice which is simply on the surface, that has no depth, no feeling, no color, be-

cause the singer has not studied, perhaps does not even know of, and certainly has not control of, his own powers.

Upon this forward placing and high forward re-inforcement or coloring, we also express hatred, contempt, and kindred forms of expression. But the production is completely changed. Voluntarily all true conditions of artistic tone are disturbed at the organ of sound. High points of resistance are brought into action in order to give to the voice that hard, disagreeable, unsympathetic effect or color which is so necessary in order to express the intensity of hatred or contempt.

The expression of the face, the eyes, and the position of the body, must always be in sympathy with the sentiment, otherwise the greatest effects of tone color are impossible. Hence the importance of pliable, flexible face and throat muscles; hence the importance of no local face or throat effort. One cannot produce bright effects with a somber, doleful countenance, so often the result of face effort; neither can one produce somber or sad effects with a hard or indifferent facial expression, so often the result of local effort.

We are accustomed constantly to read and hear of but two qualities or styles of voice, the open or clear tone, or timbre, and the covered or

somber timbre. Yet there is between these two extremes the golden mean; the tone that is neither light, shallow and gay, nor deep, intense and somber. It is the tone which receives its color, character and fullness principally from the cavities of the mouth and the upper throat; the tone which may be said to be the every-day tone of the voice, the most used and most useful of all tones ; the tone which is used to express all shades of feeling and sentiment except the extremes of lightness and brightness, and of depth, intensity and dramatic force; the tone which, for the want of a better name, I have called the dignified tone of the voice, or the oratorio tone ; the tone which, in the well-trained voice, is susceptible of many more changes of effect, color, quality, character and degrees of power than the more light or white surface tone of the clear timbre; changes which are due to placing and to the influence of the resonance of the mouth and the upper throat, according as the one or the other predominates.

This dignified tone, this medium timbre, is best adapted for all devotional, sacred, and oratorio music, except the extremes of sorrow, supplication, and dramatic force. By it we express the feelings and emotions of praise, adoration, devotion, glory, victory, joy, gladness

and love. This tone must be perfectly free and unconfined, must take its color or character entirely from the thought, sentiment, feeling or emotion which it may be desired to express.

Every true artist must have full control of tone color, must be able, at will, to produce all light, medium or dark effects; clear or somber, open or covered, ringing or breathy, musical or unmusical tones or sounds, must be at his command. In order to do this he must have full control, not only of open forward movements, but of the opposite movements as well; those movements which control the form and action of the vibratory air current above the vocal cords. This control can but be the result of a right direction of thought and effort, whereby true conditions [equal pressure and resistance] are secured at the organ of sound; whereby we are enabled to relax all throat and face effort; whereby we secure a flexible, automatic form and action of all the parts above the chest. In this way, by correct thought, we are enabled to develop the magnificent effects of the influence of a right use or control of the resonance cavities of the voice in re-inforcing and coloring the initial tone. It is this wonderful influence of the re-inforcing and coloring power of the resonance cavities, and especially of the low, deep cavities, which gives

to the voice of the truly great artist that tone or color which is so much richer, deeper, fuller and more intense and artistic than that of the ordinary singer. The voice of the great artist is richer, warmer, deeper, more artistic, more soulful than that of the ordinary singer, because it is re-inforced and colored more by the inflation of the low cavities, the pharynx and the cavities of the larynx. To re-inforce and color the voice by the inflation of the low cavities, means perfect freedom of form and action, which freedom the ordinary singer, as a rule, does not possess; the effort being more or less local, the re-inforcing and coloring power of the cavities are greatly diminished, are often entirely eliminated. This is especially true with regard to the deep cavities; hence the voice of the ordinary singer lacks the richness, the warmth, the depth, the peculiar color of the great artist. It is true, structural differences have much to do in determining the quality and character of the voice. All voices are not equally favored by nature in their physical formation. Yet in order to develop the beauties of artistic tone, the influence of the low cavities, the voice need not be great in compass or power. The voice of the ordinary singer differs from that of the great artist, not so much in power and compass, as in color and quality,

because the production is wrong, and the dissonant instead of the harmonic elements predominate.

All tones that are not open and bright are usually called covered or somber, two very misleading terms. With many somber tone is the result of a thickening of the throat muscles, due to local effort, and to placing the tone too far back on the soft palate ; just as the clear tone is harsh and disagreeable, due to a high wrong point of resistance and to singing the tone too far out of the mouth. The skillful singer can produce bright, ringing, rich tone, as well as the more somber effects, on full low inflation. It will depend upon the placing and the manner in which he combines the influence of all the cavities. If the tone is placed well forward, is well supported and is colored by all the cavities, then it will have a ringing brightness and yet a depth and richness that the open or clear timbre never can have. If placed farther back, and colored mostly by the low cavities, it will be darker, more somber.

By the quality or timbre of voice called somber, we are enabled to portray the greatest depth and intensity of feeling, emotion and passion. By the inflation and the right influence of the low cavities we are enabled to express the in-

tensity of supplication, sorrow, despair, fear, revenge, scorn, triumph, defiance and passionate love. This is done by the manner in which we place the tone and combine the influence and color of the different cavities. There must be depth and intensity. The form and action must be automatic, must be controlled by the feeling, the emotion, the will. With the singer who has not mastered the mechanical difficulties of the voice, who cannot produce and maintain true conditions under all circumstances, this wealth and variety of tone color is impossible. Hence the many with limited powers of expression.

By way of practical example or illustration, take the following simple, single sentence: To thee I come. Sing it with varied feeling, thought and emotion on a note about the middle of the voice. Give yourself up entirely to the state of feeling which the thought or emotion suggests.

First:—You come with indifference. It matters not to you whether you come or not. The expression of the face and the tone of the voice will be commonplace, indifferent.

Second:—You come with gladness, in expectation of pleasure and gaiety. The expression and the tone will be light, bright, gay, but with no depth of feeling or tone, all surface effect.

Third:—You come with dignity. You have

sent for me and I have come. The expression of face, the attitude, and the tone of voice must indicate your dignified position and self-respect.

Fourth:—You come in triumph. There must be a ring and color in the voice that at once indicates your state of feeling—a ring due to forward placing, to open free form and action, and a color and richness which can but be the result of the influence of the low cavities.

Fifth:—You come in sorrow. The expression of face and attitude indicate the state of feeling. The tone must be deep, dark, somber, heart-breaking; must take its color almost entirely from the low cavities.

Sixth:—You come in supplication. The intensity of thought, feeling and action must be heard and felt in the tone of the voice. The tone must be dark, deep, intense. Every fiber and every nerve must tingle and vibrate with the intensity of suppressed emotion, until the electric or magnetic current goes out to the hearer and softens and influences him in your favor.

It is only when the deep cavities are inflated, and especially the ventricles of the larynx, and when the exit of the breath is controlled by the approximation of the breath bands, that one can imprison and compress the air in the lungs until it glows with inward fire, until it sets in vibra-

tion every muscle and nerve of the body. In this way one can sing, as it were, with the very heart and soul. With high resonance and high resistance, it is impossible to do this; it is too far away from the seat of feeling.

Seventh:—You come in defiance. This state of feeling or mind calls for dramatic tone—the tone which has the freedom and ring of the most open tone and yet the breadth, depth, and fullness, [but not the color] of the deepest, darkest tone. This tone differs from all others. It must have the greatest possible breadth, depth and fullness of all the cavities; the re-inforcement of all the powers, and the open, free, ringing quality of forward placing.

Thus one might go on giving descriptions of many more tones which would illustrate many other conditions or states of thought and feeling, even on so simple a sentence as, To thee I come. The above, however, are sufficient to show that the true artist can express every shade of thought or feeling by the color or character of the tone.

"It is interesting to note—such is the beautiful harmony of nature—that it is impossible to produce a somber tone with a bright expression of face, for in order to hold the sound sufficiently inside. the mouth must be more rounded and

closed than in the smiling position. Conversely, a joyous note can not be perfectly vocalized with the countenance in the lines and form which express melancholy. A singer, who has studied long enough to have the voice under some control, should be able to sing the same vowel sound with such difference of vocal form that the greatest variety of expression may be given. Take, for instance, the words "My heart" on repeated ḡ; if they are sung with lips parted in a joyous expression, and the tone thrown vigorously forward on the front slope of the roof, the conclusion, "is glad," should spring to the listener's mind before it is sung. The same words on the same note, if the upper lip is low, the opening of the mouth toward the perpendicular instead of the horizontal, and the tone vibrated on the back of the roof and pharynx, should immediately indicate to the listener the close, "is sad," even without the suggestiveness of a minor chord or decreased tempo. It is sometimes very effective to change the position of one sustained tone, if it be of sufficient length—a change, for example, from an open liquid, but not too forward tone, to a closed inside tone, with increase of pressure, denoting an intensifying of tenderness into passion. A sudden cloud over the sun's face could not cause a greater change in the expression of

nature than such a variation of color causes in a musical tone.

This coloring of vocal tone is of course often brought into play by cultivated singers, but by no means as frequently or as systematically as it might be; and yet the scope of expression in singing is wider in this direction than in any other." *

ARTICLE 15.

Covered Tone.

Most recognized authorities on voice and voice culture now advocate the study, development, and control of what is called covered tone. The greatest and most successful singers of the world use almost entirely the covered tone. The change from the covered to the open tone, or from the open to the covered tone, appears to be more marked in the male than in the female voice, and yet the principle is the same, and the result is to a great extent the same.

With most singers open tone means, not freedom, but license. They appear to think that they are privileged to sing as open as they please: result, hard, harsh, disagreeable, white, unmusical tone, devoid of all feeling and color.

* Werner's "Voice Magazine," for December, 1888.

Such tone is the result of wrong production, of wrong conditions; usually of wrong high resistance, and of high resonance only; hence the hard, open, unmusical sounds. These open, hard tones are frequently met with in the tenor voice and the high baritone, at the transition from the chest to the medium form. They are either sung way out, a yell, or in the effort to cover them they are so pinched and contracted that they become weak and breathy. The same conditions are quite common in the female voice on the upper chest tones from middle C to F or F sharp, first space. So long as right production is not understood this trouble in the male and female voice is the most difficult of all vocal defects to overcome; hence the hard, upper, chest tones so common to the average tenor and alto voices. When right production is understood, however, it becomes quite an easy matter. This open, white tone is not correct singing form, common as it is. It is halloing or yelling, not singing; hence is not the open tone which, under certain circumstances, is so delightful, and which we shall here consider in connection with covered tone.

Another error with many, which is even more common than the open white tone, is the pinching and contracting of the mouth and throat in

the effort to cover and control the tone. With such, covered tone means contracted form. They do not know that it is altogether possible to have the same freedom and fullness, and even more fullness, on covered tone than they have on open tone; that it is possible, right, and artistic to cover and control the tone without bringing into wrong action the interfering muscles of the throat. All tone, open and covered, can be correctly produced on large, medium, or small opening, or form, of the mouth and throat. The size or form must be the result of the effect it may be desired to produce, the result of thought and not of local effort. Open mouth does not necessarily mean open tone, nor does closed mouth necessarily mean covered tone. The conditions, the manner of re-inforcing, and the placing determine these important points. Let us see what correct, open and covered tones are, and why the covered tone is the tone so greatly to be desired.

All tone, open or covered, must have perfect freedom of form and action. There must be no interference whatever above the organ of sound. Whether the form be large, medium, or small, it must be flexible, free and natural; not the result of direct local effort, but of thought. If the desire is to produce large form or tone, the parts

must automatically take position for large tone, in response to thought or will-power. If the desire is to produce small tone, the parts must be controlled in the same way, through the effect it may be desired to produce. The form and action must be the result of thought. Position must not be controlled by local effort for the sake of producing effect. The tone must be conceived or formed in the mind, before it can be correctly produced by the voice. In the change from open to covered, or from covered to open tone, from large to small, or small to large tone, there must be no hard drawn lines, the result of direct local effort of face, lips, mouth or throat. The exit of the air current must be controlled by the approximation of the breath bands, which approximation must be the result of the right management of the motive power and resisting force, as before described. If this principle of control, of equal pressure and resistance, is understood and mastered, then the singer can understand and fully appreciate what is meant by perfect freedom of form and action above the chest; then he can have the same freedom on open and covered tone; then, and then only, can he completely disassociate muscular from vocal effort.

Correct, open and covered tones are the result

of placing, of form, of re-inforcement of the cavities, and of position of the organ of sound. Open tone does not mean simply open form and freedom of exit, nor does covered tone mean contracted form and lack of freedom. In considering these points the reader and student must be careful not to confound vocal effort and resistance with the tone itself, the direction and placing of the air current. This is a mistake that is very often made, hence a wrong direction of vocal effort.

If the tone is placed well forward upon the hard palate; if the organ of sound is high; if the tone is re-inforced and colored by the high cavities, principally the mouth; and if the true point of resistance, the approximation of the breath bands, prevails, then we will have correct, open, bright, musical tone. An open tone of any power and size can be produced in this way. If the true point of resistance prevails, the tone must be musical; for, under the conditions which secure the true point of resistance, which control the exit of the air, it is impossible to sing or force the most open tone out of the mouth. In order to do this the conditions must be changed. If the true point does not prevail, then a wrong high point of resistance will be forced into action in order to control the voice, and the result will be a hard, open, white, unmusical tone.

If the tone is placed back in the roof of the mouth, more in the arch of the hard palate, not in the throat [a serious, but common mistake]; if the organ of sound is low; if the tone is re-inforced and colored almost entirely by the low cavities, then we will have the deepest, darkest, most covered tone of voice. If, however, the true point of resistance prevails, we will have on this deep covered tone the most perfect freedom of form and action on all degrees of power. If the true point of resistance does not prevail, then a wrong point will be forced into action; then the interfering muscles of the throat will contract and thicken in order to control the tone, and the result will be a throaty somber tone.

If the tone is placed well forward; if the organ of sound is in medium position or low, according to the effect it may be desired to produce; if the tone is re-inforced and colored by the combined influence of all the cavities, but more by the low than the high; and if the true point of resistance and control, true conditions, prevail, then we shall have the most perfect, the most beautiful, the most useful covered tone which the human voice is capable of producing. Then we will have the tone that is susceptible of the greatest variety of shades of power, of color, and of effect; the tone that has the finest carrying quality and

the richest, warmest red color of the voice; the tone that is the most intense, that has the most heart and soul, that develops more of the powers of the singer than any other; the tone that is called artistic; the tone that distinguishes the voice of the great artist from that of the ordinary singer; the tone that was the pride and glory of Campanini in his palmy days.

This medium tone, that is called covered, is more desirable than the open tone, because it has more variety of color, more intensity, more heart, more soul, and yet the same freedom of form and action, and even more power. The artist must have control of all shades and effects of tone, good and bad, right and wrong. All are properly used at times for dramatic effect. As a rule, the solo singer should not sing concerted music with the same tone of voice that he would a solo. For concerted music, the tone of voice should almost always be a little brighter, a little more open, than for solo singing. The finest solo singer in a quartette with three untrained voices, if in the concerted music he sings with his deep, rich, solo voice, will be easily absorbed by the three hard, harsh, white voices. He is compelled to sing more open. And yet the rich covered voice in solo singing will fill a larger house than the more open tone.

In passing from the lower chest to the upper chest tones, especially in the male voice, and particularly in the tenor voice, in going above C sharp, third space, tenor clef, a change must begin to take place and must be more marked as the voice ascends note after note. If the change does not take place, the voice will finally run out of the mouth and will become a yell, instead of a singing sound, so common with the untrained tenor. In order to avoid the yell, the tenor often makes an abrupt change by pinching and contracting the throat, in order, as he says, to cover the tone: result, breathy, relaxed tone, called falsetto. This change from the lower to the upper chest tones and from the upper chest to the medium tones, in the female as well as the male voice, is the most difficult point to understand and master in the science of voice culture. This is evident from the fact that so many tenors and contraltos sing the upper chest tones badly, to say nothing of other voices. If correct form and breath control are not understood, it is almost impossible to completely master the change. What this change is and how it is to be effected or mastered is an important question for consideration.

The change from the lower to the upper chest tones is one of form, of placing, of re-inforcement

and of position of the organ of sound. The change from the upper chest to the medium tone is one of form, of placing, of position of the organ of sound, and of action or mechanism.

When, in ascending, we pass from the lower chest to the upper chest, the tendency of the tone is to become too open, too hard, too white. The tendency is to narrow the throat, to contract the pillars by a local effort, thus bringing into action a wrong high point of resistance and throwing the tone out of the mouth with a hard disagreeable effect. To counteract this, the tone must be gradually placed a little higher or fuller in the mouth, or more under the roof of the mouth. The form of the mouth and throat, or of the tone, must be gradually elongated as the voice ascends. By this movement, the organ of sound is slightly lowered, which enlarges the cavities backward and downward, the soft palate rising higher and higher. In this way the tone is held in the mouth and is influenced by the re-inforcing or coloring power of the lower cavities. This is just what many try to do in passing through the upper chest tones to the medium, but their effort is a local one; hence defeat and often strain follows. The change in the upper chest voice is a preparation for the greater change which is to come, the transition from the chest to the medium

register. The upper chest tones are sometimes called mixed tones. They have the form of a medium tone, or very nearly the form of a medium tone, and the action and strength of the chest tone. They are the most beautiful tones in the voice when properly produced, and the most unsatisfactory and unmusical when the production is wrong. If the voice is understood and properly managed, if true conditions prevail at the organ of sound due to right management of pressure and resistance, then the change from the lower to the upper chest is easily effected. The change must then become the result of thought, of a study of the model tone. It must be allowed to come, not made to come—a vast difference. The singer must think right, and let the change take place in response to correct thought or will. Local effort will never accomplish it. If the teacher does not teach the pupil to think aright at this point, it will be found a most difficult change to master.

Having mastered the change from the lower to the upper chest voice, it is then in order to consider the transition from the chest to the medium register, which takes place properly in almost all voices on F or F sharp, first space soprano clef, fifth line tenor clef. At this point many voices are ruined by forcing the chest form

and action beyond their natural limits. This transition is very difficult, and the change or break is very marked, if the upper chest tones are not right. If, however, they are right in form, placing, etc., then the transition becomes very easy and the change scarcely perceptible.

In passing from the highest chest to the first medium tone, place the tone up and more forward than for the chest tone; concentrate the tone intensely behind the upper front teeth. In the transition from chest to medium tone a change takes place in the vocal action or mechanism; the plane of the cords changes and the air current is thrown or strikes further back in the mouth. This is nature's way of overcoming the tendency to yell at this point. The tone or the air current must then be brought forward along or under the roof of the mouth and firmly placed and held forward by proper support of the motive power and resisting force. If the tone is not thus placed and supported, it will go back into the throat and will be closed, breathy and weak. It is this tendency on the part of singers to relax position and support on these tones that has given rise to the term covered, or falsetto tone. It is this tendency which has caused even such an authority as Morell Mackenzie to say in his book, "Hygiene of the Vocal Organs," page 90,

that "it is almost impossible to sing a true falsetto note forte." * This is no doubt so on bad production, but it is certainly not so when the support and the conditions are right. When a tenor does succeed in singing the upper tones forward with the same freedom and brightness that he does the lower tones, then he is said to sing them chest, or from the chest, which is, of course, all nonsense.

The medium register, the high tones of the male voice, require more support, more pressure and resistance, than the lower tones, not less. They must be placed well forward and must be re-inforced by the low cavities. Then if the conditions are right ; if there is no local effort of throat or face; if the thought is right, they can be gradually and continually strengthened, until they ring out with the same power and beauty that make the lower tones so attractive. In the transition from the chest to the medium tones, the important point is to learn to think aright, and then to let the change take place, not to force it. The change is a perfectly natural one, and nature will always do her work and do it well, if allowed to, if not interfered with.

* Falsetto, as I understand it, here means the same tones that we call medium. The tones in the male voice above F or F sharp, fifth line, tenor clef.

Article 16.

Equalization of the Vowels.

This, probably the most important subject in the science of voice culture, especially in relation to the use of language in song, might properly be termed vowel restoration. It is a fact that the vowel sounds in the voices of children are more nearly right than in the average adult voice. They are more nearly the same color, hue, or quality; they are more natural. They have not been warped, distorted and forced out of correct form and placing by abuse and wrong effort. The adult must make himself understood and heard, and if he does not know the right use of the voice his efforts are usually the result of power misapplied; hence the so-called low sounds become lower, darker and more somber, and the so-called high sounds become higher, sharper and thinner. This difference in the color or hue of the vowel sounds is much more marked in the untrained singing voice of the adult than in the untrained talking voice. In the singing voice the vowel form and placing require greater sustained effort; hence power misapplied disturbs true and natural conditions of form and placing, and the original quality or color of many sounds is changed or destroyed.

In the talking voice as a rule, the sustained effort and the formation are not so great; hence the disturbance and the difference are not so marked. Scientists, and many teachers, finding this marked difference in the hue or color of the so-called high and low sounds of the untrained adult voice so common, have wrongly concluded that it was a natural condition, and therefore right. They have, for this reason, concluded that it was the proper thing to train the vowels even further in the wrong direction, which largely accounts for the many uneven voices we hear. To this wrong idea of training is due the fact that it is quite a common thing to hear on a single page of a song a dozen different shades or colors of tone; or often as many shades of color and differences of production as there are vowels in the sentence. Surely this is not science; certainly it is not art.

Right training, then, may be said to be vowel restoration; restoring the vowel sounds to their original or natural form and color. Right training or study of the vowel sounds must result in developing the same freedom, the same color, the same quality on all. This is done by maintaining the same conditions on all sounds, due to a correct and uniform production. What these conditions are, and how to control them, is an important question for the consideration of all singers and voice students.

"Having shown the errors of many modern teachers, we now turn to our scientists. These are uniformly workers of evil when they go beyond the region of suggestion, and begin to dogmatize. The old teachers always set the voice on *Ah*: this was the unit, the white light, as it were, of sound, and it was so fixed that all other vowel sounds gravitated towards it; all other vowels were made to be as near to this as possible—in effect, least change of color or timbre; but our modern scientists make the vowels as wide apart and as different from each other as possible—in effect, greatest change of color or timbre. Modern science employs too much tension of cords for the sound "e" and its approximates, so produces to the ear a tone too thin, while it employs too much relaxation of cords for the sound "u" and its approximates, so produces to the ear a tone dead and wanting in clearness.

"The corrupting influence of excessive adulteration by redundant breath was shown by the loss of tone in Signor Gayerre's "u" in the word "Fugite," [Spirto gentil] and the corrupting influence of excessive adulteration by redundant distribution of vibration was shown by feeling the top of the head while singing *i* [ee]. Scientific *i* was most felt, artistic *i* least felt; the acoustical equivalents in scientific *i* being less musical, in artistic *i* more musical."*

The individuality of the vowel sounds is due to differences in formation, and to a certain extent to placing. This individuality must at all times be preserved; for nothing is so beautiful, so artistic, under any or all circumstances, as pure vowel sound. The tone color of the vowel sound is due to the manner in which the initial tone is re-inforced by the resonance cavities. The initial tone, the tone produced at the organ of sound by

* Charles Lunn.

the vibration of the vocal cords, is virtually the same on all vowel sounds during right production. There is no doubt a slight variation in the tension and approximation of the vocal cords, as well as in the elevation or depression of the larynx. During wrong production, the conditions constantly change. During right production the conditions of control at the organ of sound are continually the same, so that the initial tone on all vowel sounds is virtually the same. The differences in the vowel sounds are due to the differences in the conformation of the mouth and the resonance cavities. The importance of the resonance cavities in training the vowels has not, as a rule, been understood or appreciated. Their influence and power to color, beautify and equalize the vowel sounds has been ignored, rather than studied and developed.

The initial tone being the same, the differences in the vowels must be due to the differences in formation and re-inforcement. These very differences have led many to widening them instead of equalizing them; thus, by wrong production, developing many qualities in one and the same voice—uneven, inartistic voice. The individuality of the vowels must be preserved by maintaining correct form. The freedom, power, color and quality must be equalized by correct inflation and

re-inforcement. In this the influence of the deep, low cavities plays a prominent part, which in many vowels in many voices is never felt or heard. It should be borne in mind that the principles here set forth for the equalization of the vowel sounds, are based upon right production; upon true conditions at the organ of sound due to a right management of the motive power and resisting force, as previously described.

Professor Samuel Porter says in an article on "Vowel Formation," which appeared in Werner's "Voice Magazine," Nov. 1884:

"The accepted theory of vowel formation is, that the vowels are produced by adjustments of the oral cavity in such ways as to re-inforce, for the vowels respectively, certain of the "overtones" or "upper partials," or harmonic notes, that are contained in the tone produced in the larynx. As regards the palatal vowels, the "front vowels" of Prof. Bell, I at one time supposed, as others I believe have done, that the part of the oral cavity especially concerned was that between the front of the tongue and the hard-palate. I have been led, however, to the conclusion that the part between the back of the tongue and the soft palate and backwall of the pharynx is equally efficient, and its action equally essential.

"The vowels are divided into what Prof. Bell calls high, mid and low,—of which the vowels in eat, ate, at, may be taken respectively as examples,—according as the front of the tongue is more or less depressed.

"But what I now aim to show is that, whether high, low, or mid, and of each of these, whether narrow or wide, there is a resonance cavity behind, as well as before, the place of greatest narrowness, and corresponding in size with the one before; that is to say, smaller

for the high, larger for the mid, and still larger for the low; and, as I conjecture, tuned each to the same pitch with the one corresponding in front, so as to respond to the same harmonic note in the tone from the larynx."

In order to study the principles of the equalization of the vowel sounds of the English language, we will take A^3 [*ah*] the Italian *ah*, as in father, for the central or starting point; not that *ah* is always the best vowel for first study, but that it is the freest in formation naturally, and that it is, as a rule, the central sound with regard to resistance, placing and re-inforcement, in the untrained voice. *Ah* is certainly the proper sound upon which to try, and upon which to start, all untrained voices. It will soon be found, however, that in many voices the production and conditions are often better on other sounds than *ah*. The best sounds, or the sounds which are nearest right in production, should then be taken as the model, as the foundation upon which to build. Of course all voices should study and practice all vowel sounds. The constant study and practice of any one vowel sound has a tendency to stiffen the action with regard to form and change of form; has a tendency to set the form of the vowel constantly used. Just as the grasping and use of the handle of a heavy hammer day after day stiffens the fingers and sets them in the di-

rection and shape of the handle. The constant study and use of *ah* accounts for the fact that many voices that are beautiful when vocalizing on the open *ah* sound, are harsh, unsympathetic, unmusical when singing with words. A judicious study of vocalises is certainly good; but the constant practice of them, as is the custom of many, is beyond doubt detrimental. As we sing with words, we should study with words. First the vowel, then the consonantal element, then the combination of the two, which means the use of words.

Taking *ah* as the central or starting point, we find that all other sounds are higher or lower than *ah*, not in pitch, but in resistance and resonance. This accounts for the fact that in most voices there is a great variety of color or timbre in the vowel sounds. Certain sounds will be deep, somber and breathy, while others will be high, sharp and disagreeable in the same sentence. Instead of studying to increase this difference, the effort should be to bring all sounds as nearly as possible to the color or quality of the *ah*. The low sounds must be brought up and the high sounds must be brought down to the level, or as nearly as possible to the level, of the *ah*. This can be done by right resistance only, and the manner in which the initial tone is re-inforced.

The tones which have a tendency to go high are here given in the order in which they are usually found in the untrained voice. Starting with the *ah* each tone recedes farther and farther from the *ah* in color and condition:

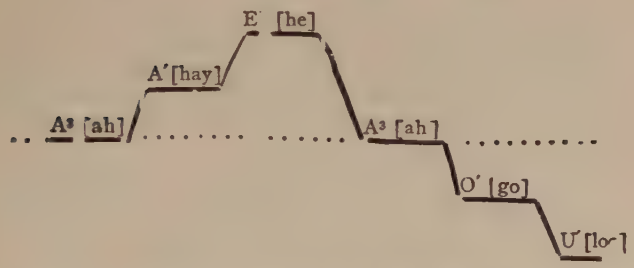
A^3 [ah]. I′ [die]. E^3 [let]. A^2 [lad]. A^1 [day]. I^2 [it]. E′ [he].

The tones which have a tendency to go low are also here given in the order in which they are usually found in the untrained voice:

A^3 [ah]. A^4 [awe]. O^3 [on]. O^2 [love]. O′ [go]. U^2 [would]. U′ [loo].

It is not necessary here, in order to set forth the principles of equalization, to give a description of all the above sounds. We will give two of the high and two of the low sounds in comparison with *ah*, and the principles given can be easily applied to the others, if re-inforcement and tone color be understood as set forth in preceding articles.

Take *ah* as the starting point ; think of the two high and the two low sounds in relation to *ah*, as is represented by the following lines :



Correct study will bring the high sounds down and the low sounds up to a level, or very nearly to a level, with the *ah*, thus :

A³[ah]. A′[hay]. E′[he]. A³[ah]. O′[go]. U′[loo],

which means the same color or quality, the same conditions, the same production on all.

On right production we say that the *ah* is an open, arched sound with depth.* The mouth is well open, the tongue is flat, the soft palate is arched high, and the cavities of the upper throat and pharynx are open, full and free. We have then the fullest and freest form possible. The cavities are all opened, as it were, into each other ; are, it might be said, one great resonance cavity. The tone is re-inforced and colored by

* See " The Voice from a Practical Standpoint," by the author of this work, for the forms and shapes of the vowel sounds.

the power and influence of all the cavities. The skillful artist on this formation can produce many shades, colors and effects of tone, as the tone is re-inforced more or less by the high, the medium, or the low cavities.

Now let us see how the A′ sound [A as in hay] differs from *ah*. We say that A′ is an arched sound without depth. We find that on A′ the base of the tongue naturally rises, that it must rise in order to produce A′. We also find that the elevation of the base of the tongue divides the resonance cavities into two principal divisions : the forward or high cavity, and the backward or low cavity ; the cavity in front of the base of the tongue, and the cavity behind it. In the untrained voice, as the result of wrong production, the tendency is to color the A′ sound by the influence of the high forward cavity only ; result, thin, harsh, white tone, or thin, breathy sound. Under these conditions we say that A′ is too high, and must be brought down to the level of *ah* by adding depth to it, by adding the influence of the low cavity.

When on A′ true conditions do not prevail at the organ of sound, when the exit of the breath is not controlled by the approximation of the breath bands, the true point of resistance, then in order to control the exit of the air, for it must

be controlled somehow, a wrong high point of resistance is forced into action. Then the wrong high point of resistance will be due to a contraction of the pillars and to too great an elevation of the base of the tongue. Behind this high wrong point of resistance there can, of course, be no resonance, no re–inforcement, hence the tone is colored by a high wrong point of resistance and high resonance only: result, thin, harsh, high tone.

In order to bring A′ down to a level with *ah* in color, freedom and power, true conditions must be restored at the organ of sound. The true point of resistance must prevail at the organ of sound, which can but be the result of a right management of the motive power and resisting force. Under these conditions, a perfectly free, natural and automatic form and action of all the parts above the chest will prevail. There will then be no interference at the pillars, which, of course, must widen and narrow in a flexible manner, for different sounds ; or at the base of the tongue, which will not be too high. The point of resistance being right, the resonance of the low cavities behind the base of the tongue will be added to that of the forward cavity, the mouth, and the tone will have the freedom, color and richness of *ah*. A can never be quite

so full as *ah*, the formation of course not being so large ; but owing to the fact that it can be more intensely concentrated and placed, it can be made as beautiful, as powerful and as effective. Thus we find on all sounds a modifying influence, a compensation, which finally enables us on right production to make one sound as easy, as beautiful, and as affective as another.

E′ as in *reed*, *he*, etc., is the next sound selected for consideration. It is, as a rule, the highest tone in point of resistance and resonance in the untrained voice, the farthest from *ah*. E′ is elliptical in formation, as may be seen in "The Voice from a Practical Standpoint." To its natural form being an ellipse and its placing just back of the upper front teeth, I think is due the fact that many systems of training and many teachers advocate the smiling position, and the drawing back of the corners of the mouth for the production of E′. The smiling position and drawn corners of the mouth simply throw the tone out of the mouth and make it yet more thin and sharp than it might otherwise be ; simply prevent all possible re-inforcement from the low cavities. How any one who will stop for a moment to study the laws of sound in relation to the human voice can advocate such measures, I cannot understand. That they are taught, is

evident from the fact that in most voices the E′ sound is sharp, thin and disagreeable.

With wrong production on E′, a high, wrong point of resistance will prevail as on A′, except that it will be forced a little higher, the parts will be more contracted, the tongue higher and the cavity smaller. This means small, pinched, contracted form and tone, difficult to produce and unsatisfactory in quality. To remedy this the tendency is to go even farther away from correct position and conditions; hence the smiling position is resorted to in order to free the voice. Ease to a certain extent in this way may be acquired, but quality, freedom and power, never.

The remedy is to restore true conditions at the organ of sound as for A′. When the form and action of all the parts are flexible and automatic, then by will-power, the freedom and fullness of E′ can be greatly augmented; not by forcing it out of the mouth, but by adding to it the re-inforcing power of the low cavities. In this way E′ can be given the tone color and richness of *ah*; can be made to sound as though it belonged to the same voice as *ah*. Under right conditions E′ can be so influenced by freedom and by the re-inforcing power of the low cavities that it will become wonderfully free and beautiful. It is true the form of E′ is small, but on right production

its intensity of concentration and placing, connected with a flexible action of all parts, which allows the influence of the power of the low cavities to be felt, make it as effective, as easy, and as beautiful as any other tone.

It is a fact that a beautiful ringing E′, as well as many of the other so-called close sounds, can be sung on the high notes of voices that are losing their original power and compass, after the open tones are gone. This is due to the fact that the form being smaller, the air current is of course not so heavy; the tone is more easily and intensely concentrated, and does not require so much pressure and resistance. I refer, of course, to voices that have been correctly taught and used, and are losing from the effects of age or over-work.

O′, as in *go*, in the untrained voice is, as a rule, lower and darker than *ah*. It is said to be a somber sound; and so it is on wrong production. The tendency of O′ is low and dark. The natural position of the organ of sound is low on O′, but that is no reason why the tone should be dark, somber, breathy and often dead sound. The dark, relaxed, dead quality of O′ is the result of wrong production. It is due to the fact that most singers make O′ by rounding and puckering the lips; by forcing them into unnat-

ural position by hard drawn lines, which at once narrow and contract the muscles of the throat. It is impossible to pucker and harden the lips without hardening and narrowing the muscles of the throat. When the muscles of the throat thus narrow and contract they become interfering muscles; true conditions are then impossible and the muscles of the throat become a wrong point of resistance. Under such conditions it is impossible to place the tone forward. The tone is then colored almost entirely by the low cavities, and owing to wrong resistance, wrong placing, wrong resonance, is dark, somber, relaxed and breathy.

The corrective for O′ is to restore right conditions at the organ of sound, by a right management of the motive power and resisting force; thus securing a free and automatic action of all the parts above the organ of sound. In this way the tone can be placed forward, can be brought up to the position or level of *ah*; can be re-inforced, not only by the low cavities, but by the high forward cavities as well: result, a clear, ringing O′, with the power, freedom and beauty of *ah*. This cannot be done by face or throat effort, by puckering and protruding the lips, as is so common. The lips, the throat, and all the parts must be allowed to form, not made to form. O′

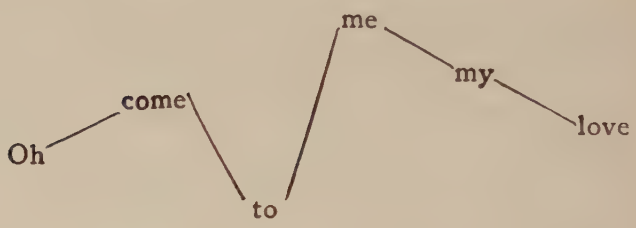
is a round form considerably elongated on the higher notes. Correct form must be secured in order to have pure vowel sound, but it must be the result of correct thought, not local effort. If true conditions prevail and the parts are allowed to form naturally, the skillful artist can produce many shades and colors of tone on O′ in response to will-power or correct thought. The naturally low position of the larynx on O′ during correct production makes it quite favorable to a firm position and setting of the voice ; hence its great usefulness as a first vowel on vowel group study. U′, as in *loo*, is also a round sound, smaller in form and deeper than O′. As a rule, in the untrained voice, on U′ the lips are more puckered and protruded, and the throat more contracted than on O′; result, a deeper, darker, more relaxed and breathy tone than even the O′.

The corrective is of course the same as for O′. True conditions must be restored and a free and natural form and action secured. Then the tone can be placed forward, can be brought to a level with *ah*; can then be colored and re-inforced by the high as well as the low cavities. If then right management of all the powers prevails, U′ will be as easy, as bright and as beautiful as *ah*.

Thus the high tones are brought down and the low tones are brought up to a level with *ah*.

Thus all sounds are equalized with regard to freedom, beauty, color and effectiveness. In this way, and in this way only, is it possible to produce all vowels with the same ease and color of tone at will. This equalization we have found to be the result of securing and maintaining the same conditions at the organ of sound on all vowels, the change being one simply of the conformation of the mouth and the resonance cavities, and of placing. In passing from one sound to another, or through a group of sounds, on a sustained note, the conditions at the organ of sound must be maintained without change, by a proper management of the motive power and resisting force. The change must be one of the mouth and the resonance cavities only, and must take place in an easy, flexible, natural manner in response to correct thought. The change must be allowed to take place, and never forced or compelled by direct local effort.

For example, take the sentence, Oh come to me, my love. As a rule, Oh, will be dark and deep ; come, will be open and free ; to, will be deep, dark, and relaxed ; me, will be high, sharp and thin ; my, will be open and white; and love, will be slightly closed and contracted, something like the following :



To sing this sentence with the same intensity and beauty of tone on all the words, true conditions must be constantly maintained at the organ of sound, and the modifying and re-inforcing power of the resonance cavities must constantly maintain the same color or quality throughout. This simply means right production on all sounds or words. For the rightly trained voice this is an easy and delightful process.

ARTICLE 17.

Natural Points or Places for Covering.

This subject, the natural points or places for changing or covering the different vowel sounds, is, or should be, of interest to all. It is, however, of special interest and practical value to the male voice, and is written particularly with regard to the changes as they occur naturally in

the male voice when rightly used. These changes, it is true, are common to all voices, but are found in the chest register only. They are not so marked in the female voice as in the male, except perhaps in the upper chest tones. The same principles, however, apply with equal force in the training of the chest tones of the female as of the male voice. As the greater number of the tones of the female voice lie above the chest register, these changes do not affect the greater part of the voice as they do the male voice, which is composed almost entirely of chest tones ; and, as in the case of the low male voice, entirely of chest tones.

These changes or natural points for covering the tone, represent the differences between what are usually called open and covered tone. They are really the points which mark the change or transition from lower to upper chest tones, and represent the difference in those tones. The transition from lower to upper chest tones, it will be found, is not arbitrary, but varies with different sounds, and averages about C or C sharp, third space, tenor clef.

The change from lower to upper chest tone, from what is usually called open to covered tone, is one of form, of placing, of re-inforcement and of position of the organ of sound as set forth in

Article No. 15 [Covered Tone] of this work. The correct management or development of this change and of the upper chest tones is more fully given in Part II. of "The Method of Teaching," pages 164 to 176, as found in "The Voice from a Practical Standpoint." *

These changes, or the different natural points of covering the different vowel sounds, have never, to my knowledge, been recorded. I have never met with them in paper, journal or book. I also find that, as a rule, they are understood by fewer singers than any other point of so great importance in the science or art of voice culture. When not understood, their tendency to evil is great, inducing harsh, disagreeable tone, often strain, and at times utter ruin. When understood and mastered, their power for good in the human voice is almost inestimable.

The tones which change or cover the lowest in the male voice are E′ [he] and U′ [loo]. These tones change or cover on G or G sharp, second line, tenor clef [fourth space, bass clef]. If E′ is carried above this point without covering; if the lower chest form and action are forced beyond their natural limits on E′, then the tone becomes hard and disagreeable; then E′ takes on more the color of A′ [day] than of E′; in fact, sounds

* By the author of this work.

more like A′ than E′. It is very common for bass and baritone voices to force the open form of E′ as high as B flat or B: result, harsh disagreeable tone. If U′ is carried above G or G sharp, without change or covering, it becomes harsh, disagreeable and white, the result of high, wrong grip or contraction and coloring; it then sounds more like O′ [go] than U′. U′, like E′, is very often forced without change to B flat or B. The form of E′ and U′ being small, the sensation of change in passing from open to covered tone is very slight; also the effect with regard to color or quality when rightly done is scarcely noticeable. Hence many singers, no doubt, make this change naturally and correctly without even knowing it. It is the easiest transition of all to make. It is important to understand it, as the principle helps very much in mastering the more difficult ones. When the transition is properly made no more change of form is felt on E′ and U′ to the highest tone of the voice; simply enlarged or expanded form in ascending and change of placing and mechanism at the transition from chest to medium register at F sharp, fifth line, tenor clef.

Two other tones cover quite low in the scale, namely, I^2 [it] and U^2 [would]. These tones cover or change on A or A sharp, second space,

tenor clef, just two half tones higher than E′ and U′. They are said to cover on A or A sharp for the reason that all tones when sung forte are properly carried open a half tone or so higher than when sung medium power; just as all tones are properly covered a half tone or so lower than the average point when sung piano. When I^1 is carried open too high, it becomes hard and white and sounds more like E^2 [let] than I^1. When U^1 is forced open beyond its natural point of covering, it becomes hard and white and sounds more like O^1 [love] than U^2. The sensation of change on I^1 and U^2 is a little more marked than on the first two vowels given, but it is slight in comparison with that of the more open sounds. The points of change or covering on the sounds already given are about the same in all male voices, high and low.

The next sounds given differ from those already given from the fact that different voices change or cover at different points. Thus the basso covers lower than the baritone and the baritone lower than the tenor. The lower and heavier the voice the lower the point of change; the higher and lighter the voice the higher the point of change.

A′ [day], A^2 [lad], E^1 [let] and O′ [go] cover at about the same point in the same voice. In

the bass voice about middle C, added line above, bass clef, or a half tone lower. In the baritone voice about C or C sharp. In the robusto tenor about D or E flat, fourth space, tenor clef, and in the lyric tenor about E flat or E. A proper management of these sounds is of vast importance in developing freedom, color and quality on the upper chest tones; also in preparing the voice for the transition from the chest to the medium register, the most difficult of all.

O^2 [love], O^3 [on] and A^4 [awe] cover at about the same point in the same voice, and as a rule about one half tone higher than those last above given. In the bass voice about middle C or C sharp; in the baritone about C sharp or D; in the robusto tenor about E flat or E, and in the lyric tenor about E or F.

There yet remains A^3 [ah] and I' [die]. These tones, the most open in the voice, are, or should be, sung open, higher than all others. These tones in the bass voice should cover about middle C sharp or D; in the baritone about D or D sharp; in the robusto tenor about E or F, and in the lyric tenor about F or F sharp, fifth line, tenor clef.

All vowel sounds when covered too low down, narrow and contract the voice, and the quality becomes somber and dead. All vowel sounds

when sung open too high up, have a tendency to make the voice white and thin, and the quality hard and disagreeable. Low heavy voices have a tendency to the former; light high voices to the latter. This largely accounts for the fact that the high tones of heavy bass voices are usually somber and lifeless while the high tones of light tenor voices are usually pinched, thin and white.

If the changes or transitions of all the tones as here given are understood and mastered, then the voice will be even throughout, will be of equal power and beauty throughout.

The student should commence by studying, understanding and mastering the lowest and easiest change or transition. Then he should apply the principle learned to the next above, in the order here given, and so on until he has reached and mastered the highest and most difficult. If he will follow the order here given, he will find that he can readily understand and master the difficult upper chest tones, and the more difficult transition from the chest to the medium register. This the bright intelligent student can do in one-fourth the time, and with less than one-fourth the effort and strain, than it is possible to accomplish the same work by the constant study and practice of the open *ah* sound, the usual and common method of proceeding.

Article 18.

Consonantal Sounds.

The impression largely prevails that a distinct and energetic articulation of the consonantal sounds interferes with sustained power and beauty of voice, and with free and proper flow of melody. At least, this is given as an excuse for slighting distinct articulation and pronunciation in singing. A free, legato flow of voice is considered by many as of more importance than a distinct pronunciation of words. There are those who even advocate the distortion of vowel sounds in order to keep the voice full and round, in order to develop what is called the violin effect. Thus everything which gives expression to thought and sentiment is sacrificed to a machine-like production.

In former days, when florid singing was the rage, when the attainment of great technical skill or execution was the principal aim or object of study, when the voice was treated principally as a musical instrument, and not as a medium by which to express thought or feeling, than a distinct pronunciation of, or even the use of words, was of minor importance. In these days of sus-

tained, declamatory, dramatic and ballad singing, when singing means more than simply beautiful tone and skillful execution, when artistic singing means the expression of thought, feeling and soul, when it means the portrayal of the passions through the medium of music and poetry skillfully wedded, in these days distinct articulation and pronunciation is of the greatest importance.

The human voice is composed of two separate and distinct instruments, the sound-producing organ and the articulating organ. The former produces, or creates, sound; the latter re-inforces, colors and molds sound into speech. These two instruments, or organs, play an equally important part in modern song. In former days the training then in vogue had a tendency to divorce the organ of sound from the articulating organ. Correct training for the best rendition of modern song must wed the action of the two organs as one; must so train them, that instead of interfering, each will strengthen and support the other. The organ of sound produces the vowel sounds, the sustained singing sounds, the musical sounds of the voice; the articulating organ the consonantal sounds, the noises of the voice. "Consonants are the bones of speech. If we utter a single vowel sound and interrupt it by a

consonant, we get an articulation. The consonant is the distinguishing element of human speech. Man alone of all animals uses consonants." A single vowel sound uttered a dozen times in the same way will convey each time the same indefinite thought or meaning ; while the same vowel in connection with consonants will convey a dozen different definite thoughts or meanings. The organ of sound and the articulating organ should first be trained separately, and then together, so that instead of interfering the one with the other, each will strengthen and support the other.

A vowel sound is the result of an uninterrupted flow of the vibratory air current. A consonantal sound, on the other hand, is the result of a complete obstruction and explosion, of a partial obstruction and explosion, or of a partial obstruction only. The place and manner of the obstruction and explosion, or of the obstruction only, determines the character of the sound. There are three points of obstruction : 1. The contact of the base or back of the tongue and of the soft palate. 2. The contact of the tip of the tongue and of the roof of the mouth. 3. The contact of the lips or of the lower lip and the teeth. Almost any first class work on the elements of the English language will give the divisions and

the location of the consonantal sounds. For the singing voice it is always best to simplify, hence we divide the consonantal sounds into two general divisions: the aspirates, those which are the result of complete obstruction and explosion; the sub-vocals, those which are the result of partial obstruction and explosion, or of partial obstruction only. The sub-vocals, as ending or final consonants, are the most difficult of all to give their proper value and effect.

Every consonantal sound, in the use of words in song, should be given its full value, for every element in the construction of words has more or less power in the way of beautifying the language and heightening and intensifying the effect. Singers who will carefully study and master the consonantal elements of the language will find them a great help in the way of intensifying the expression of thought, feeling and emotion.

The beauty and value of a consonantal sound depends largely upon its force and carrying quality. How the power and carrying quality of the consonant, the obstructive element, is to be developed without interfering with the free flow and beauty of the vowel, the singing element of the voice, is a question for serious consideration.

We have learned that when the voice is properly supported, when the motive power and resisting force are properly balanced and managed, that then true conditions will prevail, and that then it is possible to have a perfectly free, natural and automatic action of all the parts above the organ of sound, an action which is rightly controlled by correct thought or will-power only. After true conditions are secured on all vowel sounds, and the action of the consonantal sounds are understood, then they should be studied together until freedom of action and the power of each are fully developed. Then the singer should practice vowel groups with consonants and words, until the consonantal sounds can be given their full value and carrying quality, without interfering with the sustained power of the vowel, and with the least possible obstruction to the continued or legato flow of the voice. To do this the action of the articulating organs must be short, sharp, quick, flexible and automatic. To do this, true conditions of support and control must continually prevail at the organ of sound. And this it will be found is the solution of the whole question; for upon true conditions at the organ of sound depends the success of all else.

When under true conditions a consonantal ob-

struction is met with, the articulate action is short, sharp and flexible; for there is no local interference with the action of the parts. When under true conditions a consonantal obstruction is met with, the voice, during articulation, is not relaxed, the position of the parts is not lost, but owing to true conditions being maintained the action of the voice is simply suspended. The position being sustained, the voice, immediately after articulation has taken place, goes on from the very point where it stopped or suspended action, as though nothing had taken place to interrupt its continued flow. When true conditions prevail, and the action of voice is simply suspended, not relaxed, then the articulation of consonantal sounds will be so short and distinct that often to the listener the voice will not seem to have stopped at all. The action of articulation being so quick, and the voice not losing position during articulation, the effect will be like one continuous flow of sound without interruption. This is the only way in which it is possible to develop the sustained legato mode with distinct articulation, which is the perfection of art. Many sacrifice articulation for the sake of sustained voice, the legato mode, which, at best, is but one-sided art. Others sacrifice all sustained flowing melody for the sake of articulation or

pronunciation, which is again but one-sided development.

The ability to suspend the action and maintain correct position at the organ of sound during the flexible articulation of consonantal sound and then to go on as though no interruption had been met with, means the understanding, mastery and correct application of almost all the powers which govern and control the human voice.

ARTICLE 19.

Pronunciation in Singing.

A gentleman, who is a teacher and singer, writing from one of our inland cities, asks: "Is it necessary, in order to have a full round tone of voice, to have sustained legato movement, to sacrifice articulation and pronunciation in singing?" I replied, no. Why do you ask? His reply was this: "Every artist or singer that appeared in this city during the past winter, from New York or Boston, so sacrificed pronunciation to the tone of voice, that it was impossible to understand what one of them was singing about unless you knew the song." A rather bad showing surely for New York and Boston singers, and a showing that is entirely unnecessary; a show-

ing which is the strongest evidence of but one-sided development. And yet it is called art, and such are called artists.

The true artist must be able, as a rule, to pronounce as distinctly in singing as in reading or talking. Anything short of this is not true art. This he must be able to do with the least possible disturbance of the sustained legato flow of voice and beauty of tone. The true artist must be able to sing with the beautiful, legato mode, and at the same time articulate and pronounce with the purity, distinctness and telling force of the accomplished orator. In order to do this he must have perfect control of sustained vowel form and placing, and of flexible automatic action of the articulating organ. To have this control he must be able to produce and maintain true conditions at the organ of sound during the act of articulation, as shown in the preceding article on consonantal sounds. There are times and places, it is true, when the music prevents or defeats distinct pronunciation; such, however, are the exception and not the rule.

In this age of modern, declamatory, dramatic and ballad singing, an artistic rendition or pronunciation of words is of really more importance than the music. The average audience begins to demand the words, the sentiment, the thought,

as well as the music. In a song which is written and sung for the music only, the words, of course, are not so important, and often mean but little or nothing. In dramatic singing, which is usually intended to portray the intensest passion, the words are of vast importance. In the ballad, which tells a gay and interesting story, or more often a sad, pathetic one, the words are almost everything. In ballad singing, the audience demands the thought, the sentiment, the feeling, the soul, the passion of the story, and this cannot be imparted without distinct, artistic pronunciation. Though the voice may not be great, yet if the singer skillfully combines words and music; if he imparts the sentiment with intensity of feeling and expression; if he makes his audience feel, he has at once won the hearts of all. The importance of distinct pronunciation in sacred song is especially emphasized by the lack of it in modern church choirs.

In order to pronounce well, in order to have artistic control of language in song, one must study and master separately and together all vowel form and consonantal element. Always first study the words and music of a song or ballad separately and then together. Read the words aloud with pure, distinct pronunciation, until every vowel and consonantal sound is given

its true value. Study the story until its sentiment, feeling and passion are burned into the heart and soul; then apply it to the music, and if the music is well studied and not beyond the voice, and is properly wedded to the words, all effects can be greatly heightened and intensified by the aid of the music. It is wondcrful how in this way the story can be told and the situation, the picture, be drawn, and placed before the minds of the audience. It is wonderful how the singer can forget himself in the telling of the story; how he can become, as it were, a part of the story itself; how by the intensity of tone, feeling and expression, he can impart his feelings to his audience. Only he who has mastered his art and is a true artist, can fully understand and appreciate this intensity and power of feeling and soul in song. To reach this high plane, one need not have a great or phenomenal voice, but one must have artistic knowledge and control, artistic sense and sentiment, and artistic expression.

Carl Formes says: "A good clear pronunciation is a most essential part of a singer's education. Too great importance cannot possibly be attached to this part of the vocal art. It is well known that the vowel as well as the consonantal sounds must be somewhat exaggerated in singing, so as to make them audible; otherwise the

tone of the melody will obscure the sound of the letters forming the words of the text."

Walter K. Wheeler says: "To be an attractive singer, good pronunciation, coupled with proper elocution, is indispensable. Anything short of it, places the vocalist in the third or fourth grade of artists, no matter how rich the tone or how wide the range of voice may be."

John Adcock, in "Werner's Voice Magazine" for June, 1889, says:

"Although indistinct pronunciation is often the result of carelessness or of idleness, its chief cause is the want of proper attention to the meaning and spirit of the words. It is to be feared that singers rarely think about these, but give their attention almost solely to the music. They spend too little time in mental reflection and too much upon mere vocal execution. The sentiment of the words and their appropriate delivery, the true conception of the composer, the place to take breath with the least injury to the sense of the words, and the proper phrasing of the music, these things are infinitely more important than the top A's, the long shakes, and the senseless cadenzas, which, indeed, too often prove no embellishment, but a disfigurement. The supreme object of the singer should be to communicate to the minds and hearts of his hearers the various sentiments and passions expressed in the composition. To achieve this; a lovely voice will do much, and a pure, clear enunciation of the words will do more, but the effect of these combined may not be quite satisfactory 'for want of animation. This is because the art without love is powerless; it is because the animation which is felt at the heart of the artist communicates itself as the electric fluid; it is because, to persuade we must believe what we say, and to move we must ourselves be moved.' Finally, let us remember that the singer's object is threefold: To be heard, to be understood, and to be felt"

ARTICLE 20.

The English Language in Song.

The English language is becoming more popular day after day, in song, as in every other respect. It is time for those who sing in English to learn to pronounce it correctly.

It is claimed that the English language is difficult to sing. It will be found that, almost without exception, those who make the claim have spent years in studying what they call the Italian method, the Italian language, etc. After years of such study they are surprised to find that they cannot step upon the stage and sing with ease, distinctly and correctly, an opera in English.

The pronunciation of the average English or American-born singer is but little better than that of the foreigner, simply because he does not know or understand his own language in song. There is no necessity for this condition of things, and it is so because, as a rule, the singer does not study and master the vowel forms and consonantal sounds of the language, correct enunciation, articulation, pronunciation. The English language is not difficult to sing when understood;

that it is more difficult to master than the Italian is true, but when its vowel forms and consonantal sounds are mastered it becomes as easy and as beautiful in song as any other.

Every singer should study the Italian language in song; it gives a breadth and beauty to the voice which is very desirable. But all singers should first master their own mother tongue. The constant study of the Italian will not make easy the correct use of the close English sounds. The constant study and practice of the broad open sounds only, forms the mouth and throat to fixed positions, and when the closer sounds are attempted, as they must be in the use of words, either the pronunciation of the word is broadened and distorted, or it is contracted, pinched and ugly. First study and master the vowel forms and consonantal sounds of the English language in song, and the study of the Italian becomes mere play. Correct vowel form compels accurate throat adjustment, and proper throat adjustment always means perfect freedom of voice, whether the vowel be an open or a close one.

"English compares favorably with the most beautiful of languages. A language must to some degree represent the people out of whose needs for expression it has grown. Singers usually prefer to sing in Italian, thinking it more

beautiful, a more ideal language than our own. This is a mistake. There is no beauty in Italian that cannot be matched by an equal in English. The cause for this very general opinion lies in the fact that the beauties of Italian are better known to the Italians than are the beauties of English to the English. The low-pitched, passionate "t" of Italian is perfectly good English when used in the expression of passion only. The same is true of "d" and several other sounds. . . . Few speakers have sufficient powers of observation to know that every sound in English is daily spoken in several modifications as means of expressing what is meant by the words used.

"The laws of expression in sound are universal. This explains why it is possible for a great language like English to employ all the variations of sound essential to the expression of universal man, only they must be used as means of expression, not as affected imitations of a foreign language. Unfortunately for the English or American singer, the best musical notes are not English, and translations usually convey only the idea, not the poetry, or beauty, or adaptability to the music. The reason why we have no great English operas is not because of the poverty of our language, but because of the

poverty of men. There are few American musicians who would not be surprised if shown the beauties of "m," "n," "ng," "l," and the glides, and there is no speaker or singer who does not from ignorance of them violate the laws of glides. . . . .

"I say it boldly. There is no beauty in any language that may not with propriety be used in English as a means of expressing what it does express wherever used. For the laws of expression in sound are universal.

"Is it reasonable that a language that has grown out of the expressional needs of such a people as the English-speaking world should be lacking in possibilities of expression of the mental, emotional, or passional nature of man? Surely not—and when we find our language has possibilities almost infinite, which are sometimes but very seldom used, is it not time to begin a thorough study of how to speak English?" *

There is no reason in the world why the average pupil shall not master the vowel forms and the consonantal sounds of the English language. When they are mastered, and the voice has acquired a correct action, and is properly sustained and supported, then all pinched and

* Henrietta Crane.

contracted conditions of the throat and mouth, all muscular, local throat effort, are overcome ; then the voice becomes free, bright and ringing, and the pronunciation clear and distinct. In the voice which has thus been trained and developed, the English language becomes, in song, as easy, as distinct, and as beautiful as any other.

ARTICLE 21.

Artistic Tone Production.

There is, or can be, but one true method of tone production for all voices and all nationalities. There may be as many ways of studying, understanding and mastering the true method as there are skillful, competent, conscientious teachers who are blessed with originality. True method is nature's method; is a correct development and application of all the powers which nature has given us. He who can teach the correct development and application of all the powers of the singer in the simplest and most effective way is the greatest teacher. Methods which abound in artificiality, mannerisms and mystery, are never based upon true art or science. "Nature is never at variance with art, nor art with nature. Art is the perfection of nature."

Hence that study which is the simplest, which is based upon common sense, and which is governed by nature's laws, is the truest, the highest art. Artistic tone, then, is the result of a right development and application of all the powers of the singer; the result of all true conditions of tone production.

If the reader has understood the preceding articles and followed them in the order given, he will readily see that, according to the teachings of this work, artistic tone production is the result of a systematic study and mastery of all the powers of the singer and of a correct application of the powers to the constant support and reinforcement of the voice.

First, we learn, in the study of the mechanical movements of the voice, that in order to sing we must make effort, but that it must be right effort and not undue effort or strain. We learn the proper location of effort; that the effort must be placed upon the strong muscles of the body and not upon the muscles of the throat or the delicate vocal muscles. We learn that there is a right direction of effort; that the effort of the strong muscles of the body must be directed in a certain way in order to properly support and sustain the voice. Finally, we learn that by right effort, or by right location and direction of

effort, we develop a combined effort or action of the strong muscles of the body, which combination of forces is The Motive Power of the Voice.

We find that in order to properly adjust and support the organ of sound, we must in some way counteract the influence or pressure of the motive power. This counteracting influence or force, we have learned, lies in the proper action or effort of the strong muscles and bones of the chest. This action or effort is The Resisting Force of the Voice.

We have learned that in order to have pure tone, the exit of the air current must be controlled; that the delicate vocal muscles themselves are not able to resist the pressure and control the exit, and that the throat muscles become interfering muscles when used to control the exit of the air. We have learned that the exit of the air is properly controlled at the true point of resistance only, by the approximation of the false vocal cords, the breath bands. We have learned, that when the motive power and resisting force are properly managed, and the true point of resistance prevails, the entire body acts as a sounding board, as a resonance power in augmenting and re-inforcing the initial tone.

We also find that upon a right management of

the motive power and resisting force, upon the balancing of these forces, depends all true conditions of tone at the organ of sound; depends all true conditions in the way of adjustment, resistance and the re-inforcing power of the muscles, bones and resonance cavities of the voice.

We have learned that in the study of the mechanical movements the mind is subservient to the muscle; that the mind aids and assists in studying, understanding and mastering the right movements or control of muscular or mechanical action in developing and supporting the voice. We have also learned that if we desire to rise above the mere mechanical, the mind must finally influence or predominate the muscle; that all muscular action must become automatic, must be controlled by correct thought or will power. Hence the importance of a right direction of thought, of correct thought.

We have learned of the influence of the resonance cavities in re-inforcing and coloring the initial tone; of the power of tone color; of the beauties of covered tone or voice as compared with open white tone. We have learned that in order to have a perfectly even, beautiful tone in the use of words, we must equalize the vowel sounds and master the transitions or natural points of change or covering. We have also

learned of the importance of consonantal sounds and of distinct pronunciation in singing.

All the above points, we find, are important parts of a grand whole. They all play important parts in artistic tone production, artistic voice use. If we have control of some of them and not of others, we have but one-sided development. True art is the result of a symmetrical development of all the powers. So far our study has been principally of the development of the powers of the body and mind. We must now go farther, and develop not only body and mind, but the soul [feeling], until the soul predominates and controls all.

The powers which nature has bestowed upon the singer and the study and mastery of which enable him to produce artistic tone, which give him control of artistic voice use, must finally become, as it were, a part of himself, of his very nature; must finally be controlled entirely by his inner, higher nature; feeling, sentiment, soul.

CHAPTER III.

ÆSTHETIC.

ARTICLE 22.

Expression.

"By the term expression we mean not spoken or written language alone, but every method known to man whereby he conveys to another his thoughts, emotions and feelings. When man speaks he gives form and expression to his thoughts. To be a man one must possess self-consciousness; but to be an artist one must lose consciousness of self. Imagination peoples the inner world with forms of beauty or deformity, a world in chaos; but when we speak or express our thoughts the more subtle part of ourselves becomes objectively revealed and capable of being apprehended by others."

The object of all study, of all training and development of body and mind, physical and mental, should be to so develop and control the

powers of the singer that they finally become, as it were, a part of himself; thus enabling him to give expression to his inner, higher nature; to thought, feeling, sentiment, emotion. First study must necessarily be more or less mechanical; soon, however, all movements should be controlled by the mental process, will-power; and, finally, all must become, as it were, a part of one's very being, must be lost in the æsthetic, in the expression of feeling and sentiment. "To sing with taste and expression many qualifications are required: first, music, voice, ear, and execution; secondly, language, enunciation, mind and action. These, when combined with a just feeling, constitute the highest point of vocal excellence. Hitherto we have considered the voice as an instrument possessing the additional power of engrafting words upon its musical tones. We now proceed to a higher faculty, that of breathing into these sounds a tone of passionate feeling." "To think and to feel intensely, and to be able to give expression to such thoughts and emotions, are very different things. The power to conceive and to feel does not bring with it the ability of such expression."

Charles Lunn says: "Then let us clearly understand what we want; we want expression. We want ourselves, and we want those we hear,

to sing and play, not mechanically, but with the appearance of possessing a living heart and soul; we want our daughters to sing the simplest thing in the best way, for excellence does not consist in doing that which no one else does, so much as in doing that best which all may be striving to do. Teachers hide their ignorance under a plea that expression cannot be taught, and that 'you cannot give feeling.' Now, expression is either a thing to be acquired, or it is not; if it be not, a person either has it or has it not; if he has it he does not want to learn it, and if he has it not it cannot, according to received notions, be acquired; in point of fact, all teaching is therefore vain. . . . . The only thing that can with confidence be affirmed is that different persons have within them powers of greater or less degree, which, under similar conditions of outer influence, will cause one man to be superior to another; this latent force is awakened first into activity by an outer influence acting upon it through the nervous system. Feelings are inner states of consciousness, and, excepting the purely organic ones, are invariably the compound result of the receiving faculty and the stimulating outer cause. It is the duty of a teacher so to place truth before a pupil that previously unknown facts may, by their new impressions, generate

new states of consciousness. There are feelings which are good, others bad ; there are feelings some of which are right and others wrong. Then a teacher should, by his knowledge, accurately define the states to be acquired, pointing out right from wrong feelings, and, after causing good feelings to exist in a student, develop them to their utmost extent. . . . . Now feeling is a power, not a method. Expression embraces feeling and other things beside ; expression is the outer manifestation of an inner state of consciousness."

"There is one thing more important than knowing self, it is governing self. There is one thing better than crushing impulse, it is using impulse. The life of the ascetic is half true, the life of the voluptuary is the other half of the truth. The stoic may be said to be blind at least of one eye. The cynic is very nearly blind of both, since the power, and the passion, and the splendid uses of existence are hidden from him, and all these go wrong in various ways, from abusing, misusing, or neglecting the emotional life.

"The Greek was not far wrong when he laid such stress on gymnastics and music. Of music, indeed, in its modern, exhaustive, and subtle developments, as the language of the

emotions, he knew nothing, but his faint guess was with a certain fine and unerring instinct in the right direction. . . . . And we, living in the full development of this divine art of music, put it to less practical use than the Greek. It remains for us to take up the pregnant hint, and claim modern music as the great organ of emotional culture and emotional discipline. . . . .

" Music, in short, is bound, when properly used and understood, to train us in the exercise of our emotions, as the gymnasium trains us in the exercise of our limbs.

" First, then, music rouses the emotions. Inward activities, long dormant or never before awakened, are called up, and become new powers within the breast; for, remember, emotion nerves for action. . . . . But, secondly, music disciplines and controls emotion.

" That is the explanation of the art of music, as distinguished from the mere power of the musical sound. You can rouse with a stroke; but to guide, to moderate, to control, to raise and depress, to combine, to work out a definite scheme involving appropriate relations and proportions of force and various mobility, for this you require the subtle machinery of an art; and the direct machinery for stirring up and regulating emotion

is the wonderful vibratory mechanism created by the art of music." *

Expression in singing (the æsthetic), or feeling, emotion, etc., can be studied, drawn out and developed just as other powers of the singer are developed. By thought, study and exercise, a feeling or emotion can be drawn out and developed. Feelings are aroused and strengthened by conditions that work upon them, that call them into action, and not by allowing them to lie dormant. There is a vast difference in people. Some carry their feelings and emotions on the surface and exhibit them on every occasion. With others they lie deep and are aroused only by the force of unusual circumstances, but when aroused, how intense, how dramatic, how sublime! When the feelings of such are aroused and controlled by proper training, they find expression in song that is touching, intense and dramatic.

The development and control of the inner, the higher, the emotional nature of man; that development which enables him to give full sway to feeling, emotion and passion in song, which enables him to sing with expression, depends upon two important points. First, before it is possible to give full and proper expression to the

* H. R. Haweis.

emotional nature in song, it is absolutely necessary to meet and overcome all mechanical difficulties and obstacles; to know and master all the mechanical movements and powers; to so master the mechanical movements that they become, as it were, a part of the singer himself. Secondly, after the mechanical movements are mastered, the development of feeling, of emotion, of passion, depends upon thought, upon sentiment, upon ideas; not thought so much in the abstract as in the concrete form. A touching story wedded to beautiful melody will often enable the well-trained singer to give wonderful expression to the sentiment of the song. If the singer has control of all his powers he can, under the influence of a pathetic story and beautiful music, so arouse his feelings and emotions that every muscle and nerve will tingle and vibrate. Through the intensity of his feeling and emotion the magnetic current will go out to his audience, and all will be aroused and made to feel and enjoy the delightful sensation of intense emotional feeling and expression in song.

It is true one can express various feelings and emotions by a vowel sound upon a single tone. It will depend upon the production, upon the reinforcement, upon the tone color. "The expression and intensity of feeling depend upon

the manner in which the breath is compressed and controlled; upon true conditions of control at the organ of sound. Under true conditions every feeling and emotion can be expressed by the tone color of the voice. The full development and use of the higher forms of expression, however, largely depend upon thought and sentiment aided by correct voice control. "A perfected voice can reveal almost everything which human nature is capable of thinking or feeling or being, and not only reveal it, but also wield it as an instrument of influence to awaken in the auditor correspondent experiences."

The simplest forms of expression in singing are those which relate to power of tone, to variation of tempo, and to the graces and ornaments of song. These are forms of expression which are, or should be, well known and understood by all musicians and singers. They are largely mechanical, it is true; yet they are invaluable aids to the higher forms of expression, and must be mastered in order to enable the singer to give full sway to his feelings and emotions. These simpler forms of expression are usually distinctly marked in well written songs and are fully taught in most systems of study; hence it is not necessary here to elaborate them. Here we have principally to do with the higher forms of expres-

sion; with that which cannot be represented by figures or marks; with that which exists in the heart and soul and must be drawn from the heart and soul in order to touch, to influence, to arouse, to sway.

In order to give proper expression to the sentiment of a song, the singer must be in a proper state of mind to be influenced by the thought or sentiment. This, of course, is impossible so long as there are serious mechanical difficulties to overcome. He must have mastered the words, the music, phrasing, shading, and tempo. All must become, as it were, a part of himself. He must lose sight of self, of everything, in the result. The way or manner of doing must not be thought of; he must be influenced entirely by the thought and sentiment of the song. He must look and feel the sentiment; he must forget self and everything in giving expression to the feelings and emotions which the words and music have awakened within him. This is the perfection of art; this is the highest form of expression; but this, it should be remembered, is dependent upon the study and the mastery of the first two stages of study, the mechanical and the intellectual.

There are various kinds of singers. First, there is the singer with the emotional nature,

who sings with native feeling and expression, but who has enjoyed little or no training. Such make you feel, in spite of the many weaknesses, of the many defects of voice. One cannot but feel sad to know that such cannot have correct and complete training in order to enable them to give full expression to the feeling and emotion of the heart and soul which lives and burns within them.

Then there are those whose entire training has been a study of expression ; those who have fallen into the hands of teachers who claim to believe that all development will come with the study of sentiment and expression. The study and mastery of mechanical movements having been ignored, the development is, of course, one-sided, and expression with such, as a rule, simply means exaggeration and mannerism. Many in numbers are they who are trained upon this plan.

We also have in our midst those who have had perfect, complete and exquisite training and development of all the mechanical and intellectual powers; singers whose voices glitter and sparkle like burnished steel; whose voices are like a perfect instrument in the hands of the master, so far as technical development and control are concerned, and yet who seem to have

forgotten or never to have known that they have heart and soul. Such may astonish you with their vocal pyrotechnics, with their wonderful execution, but they never make you feel.

Lastly, there are those who have mastered, not only the mechanical and intellectual forces, but the æsthetic, the power of the higher forms of expression as well; those who, by the mastery of the mechanical and intellectual powers, have been enabled to develop the higher, the emotional nature, and to give it full sway in the expression of thought, sentiment and feeling in song. Such, even though they be not great, so far as compass and power of voice are concerned, will surely win the hearts of all. Such, when great, when nature has done much for them, will always be found among the few great artists of the world.

"At present song is in bondage; sometimes to classic music, sometimes to pedantic instruments, sometimes to one thing and sometimes to another. Just now it is in danger of going into bondage to taste. We all must have things exquisite. Everything must be carried to the highest pitch of refinement. Nothing will do that has not the signet and seal of the utmost culture. I like culture so long as it regards itself as the servant of truth. But I love the heart; and I would rather hear an old cracked voice, feeble, with many gaps, singing honestly with tears the songs of Zion, than hear the finest cantatrice that ever enraptured the most cultivated congregation. And although there is to be taste and beauty in song if possible, yet if anything is to be sacrificed, it is taste and beauty. The inside, the world over, against the outside! The soul

against the body! The external goes down to let the internal out. I would not be understood as undervaluing taste and beauty in song, but that is always to be subordinate to the soul. The moment you begin to sing for concert effects, and to feel that nothing will do but the most exquisite style of music, that moment song goes into Babylon. That moment it is in bondage. Sacred song is yet to rule, as it ought to. And if song is to rule, we must remember that it must be the heart that sings, and not the voice nor taste alone. Taste, voice, everything; but the heart first." *

How can the heart be first, in cultured, refined song? By breaking down every barrier that stands in the way of heart-felt expression; by overcoming all mechanical difficulties, by sufficient mental development, and finally by the development of the higher, the emotional nature. There is no reason why the heart shall not be first in refined, cultured song. A well-rounded singer is one who has developed all his powers, mechanical, mental and emotional. Taste is necessary, style is necessary, voice is necessary, execution is necessary in all song, sacred and secular, but all must be controlled by the heart and soul.

* Henry Ward Beecher.

ARTICLE 23.

Portrayal of the Passions.

A truthful, intense, dramatic, soulful portrayal of the passions in song is dependent upon several important conditions. The singer must be able to put himself in a proper state of mind to appreciate and represent the feeling, the emotion, the passion which the words and music suggest or call for. He must for the time being forget self, and be, as it were, the character which he represents. He must be able to produce power and intensity of tone without disturbing true musical conditions. He must have full control of tone color.

The dramatic passions are love, hatred, joy, sorrow, grief, despair, jealousy, scorn, contempt, fear, anger, pity and revenge. Besides these there are many states or conditions of feeling and emotion which call for the highest forms of dramatic expression, such as victory, praise, defiance, triumph, supplication and exultation.

To have perfect command and control of all the powers of production, of form and of expression, and a quick perception of the relation of the powers of expression to the portrayal of

the passions, is the highest form of development, of culture. Every sensation, every emotion, must be instantly depicted in the face, the action, and the tone of the voice. All this is an exact science, and by correct and sufficient study and training can be developed into a perfect art. Few indeed are they who reach this high point or state of culture. This, however, is not the fault of the science or the art, but of a lack of sufficient, or a want of correct thought and study.

Many who attempt dramatic or passionate singing at once disturb all true musical conditions; they become noisy, they exaggerate, they rant, just as the average dramatic actor almost invariably does. Power is necessary, but it must be right power, not simply force, push, noise. Repose and control are as necessary in dramatic singing and acting as power. Power in song does not necessarily mean loudness. There is the power of intensity on all degrees of loudness or softness, the power of tone color, the power of facial expression, the power of suppressed energy or emotion, the power of subjugated or controlled strength or force, the power of distinct enunciation and the power of repose, which is a wonderful power at all times, and especially when given in contrast with action and force. All these qualifications, and many more, must the singer

have who can successfully portray the great dramatic passions. And yet these things are within the reach of the ordinary voice. The pupil who has a voice of fairly good compass, power and quality, who has musical sense and temperament, and who has withal good common sense, can understand and master all. One need not be greatly endowed by nature, one need not be a Galassi or a Lehmann, to faithfully and truthfully portray in song the passions of the human heart and soul.

"No theory of the passions or mere mechanical drill in their expression can ever teach a man to be pathetic. Only a disagreeable mockery of it can thus come. Pathos is the one particular affection that knows no deceit, but comes in truth direct from the soul and goes direct to the soul. It may lie dormant in us, as music lies in the strings of a silent harp, till a touch gives it life. Speaking more or less in all, it speaks most in those who cherish it most; and when it speaks it is felt by all. . . . The exercise of the dramatic faculty by itself is productive of tenderness, largeness, flexibility and generosity of mind and heart. It is based on a rich, free intelligence and sensibility, and serves directly to quicken and invigorate the imagination and the sympathies.*

* William R. Alger.

ARTICLE 24.

Interpretation.

The great artist is said to interpret the concerto, the sonata, the symphony. He is supposed to discover and elucidate that which is hidden from, or which is not plain to, the ordinary musician or hearer. He brings out by his superior technical skill and knowledge the more hidden or subtle thought of the great composer. The great artist, in the performance of the classic compositions, constantly reveals thoughts and beauties that are new to us because never before having been made plain to us. Thus he interprets or makes plain the more hidden or subtle thought and meaning of the composer. So in the singing of a song or aria, or even a ballad, nothing short of a true interpretation ever reveals all the beauties, the thought, the sentiment of the composition.

Song singing, as a rule, is merely a jingle of words and melody. If the song be tuneful and the words admit of a flowing style of voice, that is all the average performer asks for, and that is all the average audience expects. But there is a more serious view to be taken of song singing,

which demands a higher, grander, nobler performance, a truthful interpretation of the thought and sentiment of the words and music which can be fully expressed only by a proper rendition of the song as a whole.

In order to interpret or render properly a song or ballad, to say nothing of the great arias, the singer must have taste, style and sufficient intelligence to fully comprehend the thought and sentiment of the words and the more subtle thought and meaning of the music. He must so wed the sentiment of the words and the thought contained in the music that he will have full control of the higher forms of expression, of feeling and emotion, and be able to impart them to his hearers. In order to do this he must have command and control of all the powers of production, of form, and of expression. He must have control of all degrees of power and shades of tone. He must have beauty of tone or voice. He must have command of tone color, of re-inforcement, of vowel form, of articulation. He must put himself in that state of mind that will enable him to be, as it were, for the time being the character which he represents; which will enable him to change in feeling and tone of voice with the change in sentiment and music. In short, he must paint the picture of the song,

and hold it up before the minds of his audience in such a way that it will be as vividly portrayed as are the colors which the artist puts upon the canvas.

Let the singer who has given all too little thought to this higher form of song singing, take, if he pleases, a simple song or ballad that is properly constructed musically, and that is descriptive, or that tells a touching, pathetic story. Let him carefully study it in every particular, and he will be surprised at its possibilities. Let him study the words until every thought and sentiment stands out in full relief. Let him study the music until the most subtle thought and meaning of the composer becomes plain. Let him wed the words and music in study until every mechanical difficulty is overcome. Let him, then, think of the song as a whole, not as words and music, but as a pathetic, touching story. Let him forget all physical or mechanical effort, all manner of doing. Let him be influenced entirely by sentiment and feeling. Let him put himself in a proper state of mind to feel and act the character that he represents. Let him, then, give full sway to the feelings and emotions which the story awakens within him, and if he be at all of a sympathetic or emotional nature he will be surprised at the result. He will find sensations,

feelings and emotions aroused within him that he never before experienced. He will discover that which to him is a source of even greater delight, that he can impart his feelings and emotions to others. In this way an entirely new field of thought and sensation will be opened unto him. He will view the realm of song from a broader, higher plane than he ever before dreamed of. He will then, probably for the first time, fully understand what is meant in the art of song by interpretation.

Part Second

PRACTICAL

CHAPTER I.

HOW TO STUDY.

ARTICLE 25.

Know Thyself.

Singer, student, know thyself and thy art. To know one's self well is to know, not only as a whole, but in part. As the voice is so great a part of the whole being, to know the voice well one must know well self in entirety; for artistic voice in song is the combined action of body, mind and soul. The singer, to know and to have command of his art, must know and have command of himself. He must know the muscles of his body; how to strengthen and develop them, and how to control and apply their strength in the use of his voice. He must know his mind or will-power; how to strengthen the influence of the mind or will-power in controlling all muscular movements. He must know his inner, higher

nature, his emotional nature in song, and how to develop it and impart his feelings to others. Voice is not merely the result of muscular action, as has been said. 'Tis true, that which we call physical voice is principally the result of physical action; the muscular predominates all else. There is, however, besides the physical voice, the mental voice, and the emotional voice; and artistic voice in song means the three skillfully combined, so that the emotional or the soul predominates all.

The first thing that the student should do is to study the science of voice and the art of song in relation to himself, and himself in relation to the science and art; then he should finally effect the best possible fusion of all.

In order to thus study the relation of the science, the art and self, each to the others, the student must turn himself upon himself. He must turn his mind or his will upon his body and his ear upon his voice. He must study, know and master all muscular action or effort. He must study, hear and know the sound, quality and effect of his own voice. Then he must turn his will upon his inner, higher self and develop and master his feelings and emotions.

It is often a great surprise to discover how little singers know of themselves or of their art;

how little satisfaction they can give when questioned in regard to their study, their control, their support in the use of the voice. They know nothing, or at least can tell nothing, of the office, strength and control of the muscles of the body in the use of the voice. They do not know, or at least cannot tell, the difference between good and bad production; they know when a tone is good or musical, when bad or unmusical in other voices, but why good, why bad, is beyond their ability to explain. Many do not know, do not even hear their own voices; they will sing a good and bad tone with the same breath; it will depend upon the vowel sound and the pitch of tone. They will sing a good and bad tone, no doubt rejoicing in the good, but in blissful ignorance of the fact that the bad tone would discredit the merest tyro.

To know the art of song, or what singing is, and the part self plays in the study and development of the art, is of the first importance. Therefore, the advice, "forget self," which is very good for the artist or the advanced student, is very bad for the beginner.

Nathan Sheppard, in his admirable little book, "Before an Audience," or "The use of the Will in Public Speaking," says:

"My object is not to lay on rules from without, but to awaken the will and the instincts that the speaker finds within. would induce him to cultivate his will, his ear for his elocution, and his eye for his audience. I would have him know what he is about, and how to make the most of himself when he gets upon his legs before an audience. . . . A bad voice is a bad habit, to be got rid of just as any other bad habit is to be got rid of, by turning the will upon it. A good voice is a good habit, to be acquired, just as any other good habit is to be acquired, by setting the will to acquire it. . . . This method of cultivating the voice leads to the cultivation of an ear for it. Without such an ear for his voice, the speaker will know no more about the deficiencies of his voice than any other deaf person knows about the deficiencies of his. Command over the voice is impossible without familiarity with it."

ARTICLE 26.

Hints.

As a rule, the first question an applicant will ask is, "What do you think my voice is?" with the accent on *you*. The statement will usually follow that it has been called every style of voice by different teachers and singers. The applicant has been so confused by the differences of opinion among those who are supposed to know, that no doubt in his or her mind the first important question to settle is, "What is the style of my voice?" Many writers on the voice set forth the importance of knowing at the start the style of the voice, so that, as they say, no mistake be made.

Morell Mackenzie, in his book "The Hygiene of the Vocal Organs," says: "Before everything, it is essential that the true quality of the voice should be once for all determined. This is the keystone of the arch. . . . . It is not always, however, an easy matter to recognize the natural order to which a given voice belongs. . . . . Common sense, however, tells us that the voice is best fitted for that which it can do most easily and successfully. . . . . Mere pitch is not a safe guide." What, then, is a safe guide? If not the compass, surely not the quality; especially when you are trying a baritone that has endeavored to sing tenor, or a tenor that has tried to sing baritone; or a soprano that has been trying to sing alto, or a contralto that has been screaming soprano. How, then, is the teacher to decide? Why decide at all on the start? or rather, why try to decide that which it is often impossible to decide correctly and surely? Why not use common sense in this matter, as is suggested by the above quotation, even after the assertion of the importance of first deciding the style of the voice? Common sense is the keystone in this as well as in many other disputed questions.

It is not important to surely know the style or natural order of the voice at the first start

of study. The untrained voice is usually in an unnatural condition, and the quality and compass cannot always be depended upon to decide surely and correctly the style or natural order of the voice. Commence study as nearly as possible about the middle of the compass of the voice, or on the best tones of the voice. Develop right form, action, support and control on the easy compass of the voice without force or strain. As the voice gains strength and action, and the pupil confidence with knowledge, the compass will begin to expand, and if the voice be properly taught and controlled, it will finally seek and find its proper level and quality. This it will do in spite of any desire the pupil may have had as to its going high or low. If properly taught it will itself settle the important question as to its style and natural order. Of course, if the voice is to be taught nothing but the art of singing; if it is to be trained at once on written exercises and songs, without development, then it is altogether another question. No opinion or advice on this point is of any value to the teacher who knows the art of singing only; who does not know the voice or the science of voice culture.

Singing, it should be remembered, is breath in control, not breath in escape; not pushed or forced breath, but breath imprisoned, compressed

and controlled in exit. There must be resistance as well as pressure, in order to control the exit of the breath.

The true point of resistance or breath control in singing is the approximation of the breath bands or false vocal cords, the result of right management of the motive power and resisting force.

The missing link in almost all methods and systems of voice training, of voice culture, of voice use, is the important subject of resistance; resistance in controlling the exit of the air, upon which all true, pure tone depends.

Throat suction, gasping and noise in breath taking, is evidence of a wrong use of the breathing muscles. Bring the body into singing position and singing condition, at the same instant open the mouth, and instantly and naturally without the least throat suction or effort, a full singing breath can be taken. Throat suction in breathing is very injurious.

Never take hold of the throat to broaden it. It must broaden and expand through the study of effect and never by local effort. Make no effort of face, jaw or mouth: nature never intended that these parts should interfere with or control the voice. Remember that the unruly tongue is the result of wrong effort of other parts. All

movement must be free, no one part must interfere with another.

Remember that the way or manner of doing is at first of more importance than the result. First study the way, then the way and the result together, and finally control all by feeling and will.

All voices should first be trained upon the natural tone of the voice; the tone which is made without effort to increase or diminish its power. Study, first, light movements, then the more sustained. Study florid and flexible movements with sustained and legato movements until equal control is gained over all.

Intensity and purity of tone are the most desirable conditions or qualities of voice to be attained. They are dependent upon pressure and resistance, controlled breath exit. All singers strive for intensity and purity. Many fail to gain these qualities for the reason that resistance in singing, the missing link, is the weak point in most systems of study.

All harshness, all ugliness, all hard, white, unmusical tone, is the result of high wrong points of resistance and of high coloring only; while all depth, all richness, all intensity of tone, all soulful tone, is the result of control at the true point of resistance and of the influence of the coloring

and re-inforcing power of the low resonance cavities.

Principle is greater than practice. Principle without practice is, of course, of no force. Principle with moderate, thoughtful practice worketh wonders. Hours and hours of practice without principle may benefit a few, but it harms and ruins many. Voices become hard and harsh, are in fact often literally worn out, by too much practice, by hours and hours of practice without a fixed principle.

Always stand, if possible, when practicing. The standing position gives full control of the motive power and resisting force, which control secures right conditions at the organ of sound, and a free, flexible form and action of all parts above the chest.

Never show the pupil how to sing the first song until he has studied it and sung it according to his own ideas. Then show him his errors and how the song should be sung. Treat the second song and all songs in the same way. This will teach him to study and to think, and will develop originality. On the second song he will avoid some of the errors of the first and apply some of the principles learned. The third will be even better studied than the second, and so on until, within a comparatively short time, song study

and song singing will have become an easy matter for him. This, of course, applies to the pupil who has had correct voice training, voice development, who has to a certain extent mastered the mechanical difficulties.

Always give and sing songs and exercises according to the wants, needs and ability of the voice. It is better to study songs and exercises that are apparently too easy, than those that are at all beyond the easy, natural efforts and ability of the voice. One undue, overstrained effort or note will do more harm than all the remainder of the song can possibly do good.

Song writers should know the voice; should know its wants, its needs, its capabilities. The tendency of modern song writers is to write against rather than in favor of the voice. Songs are written, apparently, for the sake of writing an accompaniment that is startling in its radical changes of tempo and of modulation, and which is often against a free and natural use and control of the voice. The voice is thus compelled to go with the accompaniment instead of the accompaniment going with the voice. It matters not how elaborate an accompaniment may be, so long as it favors and supports the voice. Many accompaniments go directly against the voice, and the voice is more or less strained and hardened

in its effort to hold its own against the instrument. It would be interesting to know to what extent modern voices are hurt by modern song writers. Surely modern voices as a rule are short lived.

All action, all effort in the well trained voice, must be automatic, must be controlled by will-power and feeling when before the public. It should be remembered, however, that in order to keep all action and effort automatic when before the public, the singer must constantly study and practice more or less in private. The great pianist studies and practices his scales every day, in order that when before the public he need never give the action of his hands and fingers a thought. So the vocalist who has studied and mastered all his powers, can retain them, only by constant care, thought and study.

Remember that amongst the many evidences of correct study is the gradual development and attainment of beauty, ease and repose; of power, color and feeling; of passion, life and dramatic force; all of which means expression in singing.

Nervousness, often one of the most unaccountable states or conditions, can in most cases be managed and controlled by physical effort and will-power combined. If nervous when coming forward to sing, brace up physically. Stand erect,

straighten and stiffen the back-bone from end to end, arch the chest and set the feet firmly. The very position will give you confidence and self-respect. Then will to place the mind upon the music, or the words or the story you are about to tell in song, and forget, for the time being, your audience. Make yourself feel the story, feel how you want to tell it, and the reaction will come and soon you will be master of yourself and of the situation. The singer who is never nervous, seldom or never feels. A nervous temperament one must have to be an emotional, soulful singer, but it must be under perfect control.

Teachers, even the most skillful, may err, nature never. If your voice or throat grows tired and aches during or after a lesson or practice, be sure you are wrong or have overdone. If your voice shows the least signs of growing harsh, hard and unmusical, be sure you are wrong or are overdoing, and stop at once. If your voice breaks on a note, especially on a high note, be sure your effort or support, or both, are wrong and do not try in that way again. The above are a few of nature's warnings to us. If we do not or will not heed them, we must surely suffer in consequence.

ARTICLE 27.

A Study of Level Movements.

To the reader or student who has carefully considered the principles set forth in the first part of this work, this subject of level singing will have special force and meaning. If the principles upon which this study is based are not known, then of course to such this study is of no force or interest whatever. Singing is breath in control, not breath in escape ; breath compressed and controlled in exit. This study is founded upon a balancing of the forces, the motive power and resisting force, or equal pressure and resistance. This is the only way in which it is possible to secure true conditions at the organ of sound, which conditions are proper setting, adjustment and form of voice, or the inflation of the cavities and the approximation of the breath bands, the true point of resistance. Only when true conditions prevail is it possible to have a perfectly free, flexible, automatic action of all the parts above the organ of sound, the disassociation of muscular from vocal effort.

Sing one single tone on A^1, the broad Italian

ah, about the middle of the voice, or on that part of the voice where tone can be produced the best and easiest, with the least possible strain or effort. Study the way or manner of doing, more than the result; the way of doing, at first, is of far more importance than the result. Be assured that when the effort is right the result will surely be right, or will come right. The tendency on the part of beginners is to study the result at once ; the tone must be made to sound something near right, it matters not what the effort may be. To the singing teacher this appears like progress, but the voice teacher well knows that it means the development of faults, habits and coarseness of voice that must be overcome at some time, in some way and by some one, if the pupil ever succeeds.

First, then, study the way or manner of doing. Stand well. Turn the mind or the will upon the strong muscles of the body. Study the right location and direction of effort of all the muscles ; first of the motive power, then of the resisting force, and finally the combined action of both forces. When understood, will them into action, into right action ; make them take upon themselves all the effort of singing, the effort of support, of resistance and of control. It is astonishing how, by will power, by right direction of

thought, all effort can be placed upon the strong muscles of the body ; effort that is right, healthful, and that constantly strengthens and develops.

As we continue to study the vowel *ah*, turn the mind upon the parts above the organ of sound. Stand erect and well, and thus give the muscles of the body a chance to do their work naturally and well. If during tone production there is constriction or contraction of the muscles of the throat or of any part above the chest, if there is stiffness and interfering of the tongue, if there is grip and unnatural setting of the lower jaw, if there are hard drawn lines of the lips and hard lines upon the forehead, if there is unnatural forcing up or drawing down of the larynx, if, in short, there is any local effort of any of the parts above the organ of sound, then stop and study the matter carefully and seriously. Be assured that the above faults or errors, or any of them, mean wrong points of resistance or control forced into action by local effort, and that so long as wrong resistance or control prevails, true resistance or control cannot possibly be in force; also, that when true resistance does not prevail perfect freedom and control of voice is simply out of the question.

Study carefully the situation and will the release and freedom of all the parts above the

chest. By will power give perfect freedom to the parts above the chest, and place all effort upon the muscles of the body. This is by no means easy to do. It requires careful study, thought and courage ; study, to discover and understand just what and where the wrong effort is ; thought, to know how to relax and avoid the wrong effort and to place the effort upon the strong muscles of the body ; and courage, physical and moral, to be willing to relax all effort above the chest and take the chances as to the result. The beginner thinks that he is willing and that he is going to let go, but just at the instant of producing the tone he resorts to the old effort. It is true, the force of the old habit is upon him, but he is afraid to let go, afraid he will lose control, afraid the tone will not sound right. His direction of will and of thought is not right. In nine cases out of ten the beginner lacks the courage, the moral courage, to try right, let the result be what it may. If an effort is not right the first time, it is certainly not right the fiftieth time. Let the student will to release all the parts above the chest, and then release them, regardless of the result. He may at first, apparently, lose the sense of control, but it is the only way in which he can release all the parts above the chest, place all effort upon the

muscles of the body, and gain true, natural control at the organ of sound. So long as wrong effort and interference prevail above the organ of sound, so long perfect freedom of form, and action, and right control are impossible. The beginner who has the will and the courage to do this will accomplish as much in two months as he who lacks them can possibly accomplish in six or eight.

A point which requires serious study and consideration, is the attack or start of tone, and the support or conditions which follow. A right attack is not difficult to acquire, but to maintain right conditions after the attack requires much careful thought and study. A right attack does not mean starting the tone before the vocal cords are fully approximated and all parts are not quite in position. Such attack means striking under the note and sliding up, a very common but inexcusable fault. Neither is a right attack the result of the approximation, by local effort, of the cords before the air strikes them. Such attack means a nervous, local grip and spasmodic local effort of the muscles of the larynx, and is very hurtful to the voice. When the attack is right the vocal cords meet just as the air strikes them and the action is automatic, the result of correct thought and not of local

effort. In "The Voice from a Practical Standpoint," I said, "The vocal cords meet just before the air strikes them." I should have said, "Just as the air strikes them."

After the pupil has gained some knowledge of support, control and freedom of form and action, the attack is not difficult to understand and master. The action is natural and automatic, and if the pupil will but stand well, and place all effort upon the body, is easily acquired. The right conditions, however, which a right attack secures, and which must be maintained throughout, are much more difficult to master, especially if the principles of right support and resistance are not understood. If the principles of true resistance are not understood, then the mastery of right support and conditions, which must prevail in order to maintain perfect tone, becomes but a matter of experiment and chance, and not of definite knowledge and study. This is evident from the fact that many singers start the tone well, but fail to properly support and sustain it.

Right attack is the result of a right action of the motive power. Correct support is the result of a simultaneous action of the resisting force and motive power, whereby true conditions secured at the start are maintained; hence the attack must be instantly followed by that sup-

port which will maintain true conditions, secured by the right attack, at the organ of sound. This, however, is just the thing which many singers fail to do. They start right, but fail to keep right. Immediately with the start of tone true position and conditions are lost at the organ of sound, by a relaxation or drooping of the chest; the result is that muscles which should be tense and vibrant relax, and muscles which should be relaxed and pliable are hardened and thickened. When true position and conditions are lost at the organ of sound it is due to the fact that the upper part of the organ of sound has slipped, that the breath bands, the true point of control, have separated, and thus high wrong points of resistance are forced into action, in order to support and control the voice. Of course under such conditions artistic tone is impossible. "This slipping of the higher part of the instrument is a common fault with beginners," and in fact with many singers.

The corrective for this is as follows: Instantly with the start of tone, instead of allowing the chest to droop, slightly arch it, and at the same time, by the strength of the diaphragm, slightly lift, raise, or support the entire trunk of the body. In this way the organ of sound is correctly and naturally adjusted and supported, and true con-

ditions are secured and maintained throughout. For this, some vowel sounds are more favorable than others, for the reason that some sounds naturally favor a correct position and adjustment of the organ of sound, as was learned in the article on the equalization of the vowel sounds. If it is found that right attack and support can be secured better on other sounds than *ah*, then take the vowel which the voice can best produce on first study. Do this, not only for the study of attack and sustained tones, but on all movements. Judgment and common sense alone can be a safe guide with regard to such matters. The student must, of course, study all vowel sounds, applying the principles given, for the production and support of *ah*. Proper form and placing must be studied, and true resistance and support must be acquired, thus developing the same freedom, color and beauty on all. Then the vowel sounds should be studied on level notes or single notes in groups. In passing from one vowel sound to another in group study, care must be taken not to lose the position and conditions at the organ of sound ; the change must be one of the mouth only. If the conditions change at the organ of sound, the production will be changed at once and the color and character of the vowels will be different. In order that the

low vowels may be brought up and the high vowels brought down all to the same level, which means the same production on all, the conditions at the organ of sound in passing from one vowel to another must be maintained. This must be done upon the principles given above; the principles which secure and maintain those true conditions on sustained tone, which must follow the attack if the tone is right and artistic. The true point of resistance must prevail on all sounds; the change must be one of the conformation of the mouth only. Hence the importance of level vowel group study.*

After all vowels are studied in groups, then study the same vowel groups with the consonantal sounds, thus making syllables; first with the consonant as the initial letter, then as the final letter of the syllable. In passing from one syllable to another, especially if the consonant be a complete obstructive, care must be had not to lose true conditions at the organ of sound. The action and position of the voice must simply

* For a proper arrangement of vowel group study, for the natural forms of the vowel sounds, for exercises upon which the principles set forth in this work can be studied and applied, see "Voice Exercises, A Study of the Natural Movements of the Voice," by the author of this work. Published by Wm. A. Pond & Co. Can be had through any music dealer, or by addessing the author.

be suspended during the articulation of the consonantal sound, and the voice must go on after articulation as though nothing had interrupted its flow. This must be done upon the principles above given, and as set forth in the article on consonantal sounds, No. 18.

After the vowel groups have been studied in connection with consonantal sounds, then sing entire sentences on single tones. Sustain the vowel forms and articulate the consonantal sounds on the same principles as given above.

This study of all the vowel sounds on single tones, of vowel groups and of sentences, applying the principles of true production and support, cannot be overestimated or overdone. After the middle and low tones are well developed in this way, the study of level singing should be continued on the higher and high tones of the voice, as the voice gains in strength and freedom of form and action.

First study the way or manner of doing, then the way and result together, and finally the result only. All should finally be the result of the effect it may be desired to produce, the result of feeling.

First study the clear timbre, then the more serious or dignified tone or quality, and finally the somber or sad effects. It is wonderful the

effects which may be produced even on a single vowel sound, by associating thought with it, to say nothing of sentences which in sentiment are bright and joyous, dignified and serious, or somber and sad.

"Placing the voice" is a term that is much used, but little understood. Every one, no doubt, knows when the voice is forward, or when it is placed, and when it is not. But why forward, or why not forward; and if not, how best to bring it forward; are points that are not always understood. The forward placing is the natural placing of the voice. If the voice is used easily and naturally, if there is no interference, the voice will be well forward, well placed without teaching or study. I have known voices well placed before study, which, after a year's study had lost all placing and beauty. Such study is surely not culture. The voice is not placed or does not come forward, because there is interference or obstruction somewhere between the organ of sound and the mouth. It is useless to attempt to place the voice so long as the obstruction remains. It is ruinous to attempt to force the voice forward, as is so often done. "Free the vocal channel," by securing right conditions at the organ of sound, and the voice will place itself, or will place without effort at the will of the singer.

Article 28.

A Study of Ascending Movements.

Every tone in ascending, is the result of increased tension of the muscles of the organ of sound, the vocal muscles and the vocal cords; of increased tension, grip, contraction or effort of the motive power and resisting force, and of increased velocity of the vibratory air current. With the unskilled this usually means wrong effort, power misapplied: result, push, force, ugliness, and often overstrain in ascending movements. With the singer who does not know how or where to apply the increased effort necessary in ascending movements, the tendency is to pinch, grip and contract the strong muscles of the throat in order to counteract the increased breath pressure, to support the organ of sound, and to control the tone. This accounts for much in the way of ugliness, harshness, and limited compass.

Our study here is to learn how to sing ascending movements and high tones upon the same principle that we sing the middle and low tones; to learn how to sing ascending movements without push, force or strain upon the organ of sound

and without grip, contraction or interference of the muscles of the throat.

We will take for our study a simple arpeggio or cord 1, 3, 5, 8, of any key or all keys. It is best first to study the principles here given upon the easy or middle tones of the voice, and then, when understood, upon the higher tones. For a systematic study of ascending as well as descending movements we would refer the student to the voice exercises mentioned in the preceding article, No. 27.

Remember that the tone or the vibratory air current is one thing, and the muscular effort or resistance is altogether another thing; also that the direction of the tone is one thing, and the direction of the effort or the resistance is quite another thing. The tendency in ascending is to follow the direction of the tone with the effort. This fault, so common, is the source of much serious trouble, is largely the cause of the failure or comparative failure of many. If in ascending, the direction of effort follows the direction of tone, then the organ of sound will surely be disturbed, will be pushed or forced out of proper adjustment; then the true point of resistance and control at the organ of sound will be lost and wrong resistance will be forced into action in order to support the organ of sound and control

the tone. When the organ of sound is pushed the breath bands separate and the muscles of the throat, or some point between the larynx and the mouth, is forced to grip and contract, in order to break the force of the current, to support the larynx, and to control the tone. Under such conditions, of course, beautiful, artistic tone is impossible. In ascending, all increased effort must be placed upon the motive power muscles, and all increased resistance upon the chest and chest muscles, and these forces must be constantly balanced. In this way, equal pressure and resisttance, upon which depend all true conditions, prevail on the highest tones, and the organ of sound is not disturbed nor the muscles of the throat forced to interfere.

This is the remedy: Sing an arpeggio, 1, 3, 5, 8 of a scale. Commence on that part of the voice where the middle and low tones, 1, 3 and 5 of the arpeggio, have, to a certain extent, been understood and mastered. If all effort is placed upon the muscles of the body, and these tones are round, free and mellow, then the conditions may be said to be right, for that stage of the study. The object is to produce the high tone, 8, with the same freedom and quality, without interference, without disturbing true conditions. Place or turn the mind upon the

effort and the ear upon the result. If in singing up, it is found that the high tone has lost the mellow quality and freedom of the lower ones, if it is hard and white or veiled and breathy, then the effort has surely followed the direction of the tone and the production has been entirely changed. Then the control has been lost at the organ of sound, the air squeezed out of the cavities, and wrong high resistance or control forced into action.

To correct this, sing up, think down ; let the air current go up, but will the muscular effort or resistance down. The air current must go one way, up and forward. The resistance or effort must not follow the direction of the air current, but must apparently go the other way. When the tone goes up, the pressure must be greater and the resistance must be increased ; to do this properly the sensation is as though the increased effort of resistance or control was down. The object is to maintain the original conditions against increased pressure from below. One can press with one's hand down hard and harder upon an increased and increasing upward pressure without moving the position of the hand and the same applies to the action or effort of the resisting muscles.

In singing up, stand erect and well ; will all

effort and increasing effort, pressure and resistance, upon the muscles of the body. Allow no local effort whatever above the chest muscles. In ascending, gradually open the mouth and elongate the form; open as though down to the lungs, as though there was nothing between the mouth and the lungs. In this way the tendency to grip the throat is largely overcome and the breath bands are compelled to approximate and control the air current. The opening of the mouth and the elongation of the form must be automatic, the result of a study of form and effect and not of local effort. In right production there is no sensation of control or interference whatever above the organ of sound. In order to overcome the tendency to grip and close the throat in ascending movements, in order to maintain true conditions throughout, the singer must understand the motive power and resisting force, must know how to balance these forces throughout. To do this he must know what to think and how to think it; he must be able to control all by will-power.

A very good way to study the arpeggio, or ascending movements, is to think the tones with regard to production as on a level instead of going higher and higher. One tone is said to be higher than another because the tension is

greater and the air current swifter, more vibrations to the second, the result of greater pressure and resistance. The notes go higher and higher on paper and on the pianoforte, but in the organ of voice the production of the low, middle and high tones may be said to be on a level; the high tones are produced at the same point and in the same way as are the middle and low tones, the difference, so far as effort is concerned, being one principally of increased pressure and resistance. In ascending, then, think the production or the effort as on a level. Think and will each succeeding tone more powerful than the last, and the pressure and resistance will be increased. The tone or the air current must, of course, be gradually placed up and forward, and the form elongated ; the effort must be carried on a level, as it were, and increased effort or strength must be applied exactly in accordance with the pitch, as the voice goes higher and higher. This is often the very best way to develop and maintain right effort and conditions in singing ascending movements.

No effort above the organ of sound has anything whatever to do with driving or increasing the power of the voice. All effort to increase the power must come from below, must be effort which increases the volume and velocity of the

air current. Of course effort above the organ of sound cannot do this. Hence all throat effort in singing is simply wrong resistance and control, which must be, and which cannot be avoided, so long as the production is wrong. When the power is increased the throat effort must be increased, the pinch and grip must be tighter in order to support the organ of sound and to control the tone. Under these circumstances the muscles of the throat swell, and the singer often becomes red in the face during forte singing. I have seen this with even so-called great artists. How much greater they might have been had they known and mastered true resistance, true production, no one can say. One thing is certain, their voices would at least have lasted much longer.

ARTICLE 29.

A Study of Descending Movements.

Every tone in descending is the result of diminished tension of the vocal muscles, of the muscles of the motive power, of the resisting force and of diminished velocity of the air current. With most beginners it is easier to sing descending movements than ascending move-

ments, but it is by no means easier to learn to sing correctly descending movements than ascending movements. In ascending, the effort is constantly increased, in descending it is constantly diminished. It is at all times more easy to control on increased than on diminished effort. Singers, as a rule, understand and control the driving or motive power much sooner and easier than they can, or rather do, understand and apply the restraining, the controlling, the resisting force. The mind, will, or direction of thought has much to do with this. The pre-conceived idea, one might say, of all beginners is that singing is an upward and forward, or outward movement or effort ; hence all thought and all effort is in one direction only. To counteract this the pupil must be taught to think correctly. He must be made to know and see that singing is breath properly compressed and controlled, and not breath pushed, forced, or in escape. His mind or will must be made to look in the opposite direction. He must be taught to think and will down and back, just as he does upward and forward. He must be taught to think and will in both directions at one and the same time.

The tendency, we have learned, with the unskilled, is to grip and contract the muscles of the throat in ascending, in order to counteract

the increased pressure or effort of the breathing or driving muscles, and in order to support the organ of sound and control the tone. In descending, however, the tendency is just the opposite; it is to relax unduly all effort, all control, to take the chances, as it were, to let things go by default. The important fact is lost sight of, or is, perhaps, never thought of, that diminished or less tension and effort is one thing, and relaxation is quite another thing. In descending, all tension, all effort, must constantly diminish, but the hold, the control, must never be relaxed or lost ; and only after all tone ceases must the hold or control be relaxed and the parts assume a position of repose. When the pupil thinks of relaxation only, the tendency is to relax the hold and to lose all true position and control. For this reason many sing just as badly descending as ascending movements, but the effort not being so great, or rather being passive, a want of effort, the result or the effect is not so marked, and often escapes observation.

For reasons given in this and the preceding article, it will be found that all first training on ascending movements should be quick, light, flexible movements or strokes of tone; movements whereby the tone can be placed with a quick, light, flexible action or effort over or above

the point where the tendency is to grip and contract the throat. This training must be followed up by going from strokes or flexible movements to more sustained movements, and finally to legato sustained movements, until all action and effort become automatic. In descending, however, while all movements, flexible and sustained, must finally be studied, first study should be sustained legato or carried movements. In descending, owing to constantly diminished effort and tension, it is much easier to relax the grip or contraction, the local effort of the strong muscles of the throat, than in ascending. Hence sustained carried movements are first studied in descending in order to relax the interfering muscles of the throat, and thus to broaden the throat and tone; also, in order to strengthen and develop the restraining and resisting force, in order to learn to control on diminished pressure, and in order to place the low tones and develop a foundation, upon which to build the higher tones. When the throat is freed and the tone placed and strengthened on descending movements, then the principles which secure the open, free throat and tone should be applied to all movements, ascending, descending, and level, throughout the entire voice.*

* See "The Study of the Natural Movements of the Voice."

Sing an ordinary descending legato scale with about the natural tone or power of the voice, at first not too slow, afterwards slower and firmer. If it is found in descending that the parts relax and lose position, that the control of the tone and of all the parts is lost, and that the breath is exhausted, often uncomfortably so, then it is evident that the start was not right, or, if right, the conditions secured at the start were not maintained throughout. All correct descending movements depend, first upon starting right, and then upon maintaining the conditions secured at the start. The following is the plan of study and development.

Place yourself upon a level with the first or highest tone. To place one's self upon a level with a tone means to bring all the parts into correct position and to strengthen, at once, all parts in accordance with the pitch or level of the tone; the higher the pitch the more firmly the parts must be brought into position and strengthened. All parts must come firmly into position. The strengthening, of course, applies to the motive power and the resisting force. In this way the singer can place himself upon a level with the tone and can start it without reaching for it, without pushing and without undue force or throat effort; can start it and at the same time

maintain equal pressure and resistance, upon which depend all true conditions of tone. Having learned, at least to a certain extent, to start right, to secure right conditions on the first tone, the point then is to maintain as nearly as possible those conditions in descending. To do this the tension and effort of all the parts must be constantly, slightly and equally diminished, but the control of all the parts must be kept well in hand. The control of the restraining or holding force must be so managed that the parts do not relax and lose position, that the exit of the air is controlled and that the very last tone is well and firmly placed. Then the parts may relax and seek a position of repose.

This study of downward movements is the very best first study for the development of control of breadth and power of voice. First exercises should be quite short, say three notes, and should be studied on the middle and low voice. Afterwards they should be gradually extended and should be studied throughout the entire voice. When resistance and control, true conditions, are fully understood, descending movements become very easy and very beautiful.

ARTICLE 30.

A Study of Different Degrees of Power.

One of the most desirable and delightful accomplishments of the artist is the ability to sing all degrees of power and shades of tone with the same purity and quality, with the same production. It is a sign of correct training and artistic control when the soft tones are sung and sustained with the purity and intensity of the loud or louder tones, and not with the relaxed, uninteresting, unsatisfactory effect so common. It is evidence of artistic development and control when the most powerful tones, the climaxes and dramatic passages, are sung with the purity and beauty of the natural tone of the voice, the tone of moderate power, and not with the undue or unnatural effort, force, strain and ugliness so common.

The tendency is to relax during soft singing, and to push and force when more than ordinary power is wanted. This is the result of a wrong idea of voice production and support, of wrong thought, of a wrong direction of thought. When the true principles of support, and control, and of re-inforcement are understood, soft and loud

singing, and all shades and degrees of power, become one as easy as another. There is no instrument in the world that makes soft tone by relaxation. The drum is not unstrapped when the light tap is given, the violin is not unstrung when the soft tones are played, the piano wires are not relaxed during the playing of the soft passages. Why then should all parts of the human body which are interested in tone production relax and lose all intensity and resonance when soft tone is attempted? Why, on the other hand, should all effort be overdone and all true conditions disturbed when great power is wanted?

The condition of the violin string is the same on soft, medium and loud tone. The difference is that of pressure and resistance; in other words, of greater or less breadth or amplitude of the vibrations. It is true, the human voice is a much more wonderful instrument than the violin, is differently constructed, and partakes of the nature and quality of both wind and string instruments. The lesson to be learned here, however, is, that in order to produce all degrees and shades of power with the same intensity, purity and quality of tone, the conditions must be the same throughout, the same in kind, of course, not in quantity. Soft tone does not require so large

form or so great pressure and resistance as loud or more powerful sound ; but the forces must be balanced the same, must bear the same relation to each other, and the conditions must be the same, the same in kind. The singer must learn to apply strength as strength is needed, no more no less; must understand the position, form and strength necessary, in accordance with the pitch and power of the tone it may be desired to produce.

The natural tone or power of the voice, the tone which is made without effort to increase or diminish the power, is the tone best adapted for all first study. True conditions are sooner and easier mastered and applied on this tone or power than on any other. When right production is to a certain extent mastered on the natural tone or power of the voice, then the study of softer tone and more powerful effects is in order, but not, as a rule, until then. For the sake of convenience we will divide the voice into four degrees of power: piano or soft tone, medium soft, moderate power or the natural tone, and forte or the tone of great power and dramatic force. The following is the plan of study.

When true conditions are to a certain extent understood and mastered on tone of moderate

power, then try the medium soft tone, not the softest tone ; the tendency is always to sing too softly at first. If it is found that the medium soft tone lacks the intensity, purity and resonance of the louder tone, then it is evident that the production has been changed, that the tone is more the result of relaxation than of true support. Remember that relaxation and diminished effort, or diminished pressure and resistance, are not and cannot be the same, and do not produce the same results in tone production, as we have learned in the preceding article.

Sing a tone of moderate power as nearly right as possible. Turn the mind upon the powers of production and control, and the ear upon the voice, the result. Then sing the medium soft tone upon the same exact true principles which produced the louder tone; the same principles of pressure and resistance, and of control, diminished in power but the same in kind ; the same intensity, purity and resonance of tone, diminished in power but the same in kind After the medium soft tone is studied and mastered in this way, then study the soft tone and the softest effects upon the same principle. Correct soft tone is not the result of relaxation and breatl escape. The exit of the breath must be controlled and the tone sustained as in louder sing-

ing. The relaxed, breathy, soft tone, so common, lacks intensity, feeling and expression, is uninteresting and of no force whatever. It must be produced and sustained upon true principles in order to have the intensity and carrying quality so necessary.

After moderate power and soft effects are mastered, then study the full power of the voice. The pupil will then understand correct principles sufficiently well to study all power greater than the natural tone of the voice. Remember that increased power is not the result of increased pressure and resistance only, but also of increased breadth or amplitude of the vibratory wave; that increased breadth of vibration depends upon enlarged form; and that reinforcement depends largely upon the expansion and inflation of the resonance cavities. He who increases the pressure or effort without enlarging the form or without expanding the cavities in due proportion, develops wrong effort, noise and ugliness. If the effort is increased and the form is not large enough to accommodate the volume of air forced through the larynx, then the voice will be pushed and forced, beyond question.

To produce tone of great power without disturbing true conditions, stand erect and well, and increase the motive power and resisting force

in equal proportions. As the effort of the motive power increases, arch the chest, balance the forces and open the mouth wide and free. Now if no local effort of throat, or of any part above the chest be made, the cavities will expand, the true point of resistance will prevail, and the tone can be sung with ringing force without disturbing true conditions, and without the least strain. When the resistance is right, the tone will be full in the mouth, and will be under perfect control.

When all shades and degrees of tone are mastered, then the study of the swell, the crescendo and the diminuendo, is in order. This calls into active action almost all the powers of the singer; hence it is more properly a last than a first study The swell depends upon securing right conditions at the start and maintaining them throughout; upon balancing the forces as the effort is increased or diminished and upon expanding and diminishing the form in due proportion as the tone is increased or diminished.

Study first the crescendo. Commence upon correct, sustained soft tone; pass from the soft to the medium soft, to the tone of moderate power on to the tone of greatest power. If, now, true conditions are maintained throughout, if the pressure and the resistance are equally increased

and the form and the cavities are expanded in proportion, then the effort will be a perfect success. If the conditions are disturbed and the voice is pushed, in proportion as they are disturbed will the effort be a failure.

For the study of the diminuendo, commence on full power; pass from full to moderate power, to medium soft, and to soft tone without disturbing true conditions. As the tone or the pressure is diminished the resistance and the form must also be diminished in due proportion. If the diminished tone is the result of relaxation, the tone will lose its placing, its intensity, its carrying quality, and the effort will be a failure.

After the crescendo and diminuendo are to a certain extent mastered, study them together as the swell; first, from soft to moderate power, then to the full power of the voice. A correct study and practice of the swell develops, wonderfully, all the powers of the singer, especially the control of the breath, true resistance.

ARTICLE 31.

The Speaking Voice.

Speaking and singing differ principally in regard to the duration of the vowel form or sound

and the sustained or disconnected production or flow of the voice. In the properly trained singing voice the vowel is formed and sustained without change of form or adjustment so long as the tone is prolonged or the voice is carried upon the word or syllable formed by the vowel sung. In the speaking voice the vowel is formed and the tone produced or the word spoken and dropped; no sustained vowel form or prolonged tone as in singing. The most beautiful and the most desirable style of singing is the legato mode, the sustained or carried voice. When right or artistic, the conditions of true production and support are maintained throughout; in other words, correct adjustment is not lost during pronunciation; the flow of tone is simply suspended during articulation and instantly goes on after articulation as though it had not stopped at all. This is so skillfully done by the artistic singer that there appears to be one continuous flow of sound and distinct articulation at the same time, as is more fully shown in article No. 18. This legato mode is sought for by all singers, but is mastered by few, from the fact that the true conditions of vowel form and sustained or carried voice, are not well understood. While this is true with singers it is so to a much greater extent with speakers.

To the short duration of vowel form in speaking is largely due the fact that the average speaker does not carry or sustain his voice even so well as the average singer. The average speaker can get along without the legato mode much better than the average singer; hence he does not study, strive or long for it so much; and yet the legato mode, the sustained or carried voice, (true conditions throughout,) is as beautiful and effective in the talking as in the singing voice. Singer and speaker use the same instrument, and the same principles of production and support apply to both. It is said of singers that, as a rule, they do not talk well. This is true. They fail to apply the principles, which they study and master for the development and control of their singing voices to their talking voices; they do not talk as they sing. On the other hand, speakers fail to avail themselves of the advantages whichthey might enjoy by the study and application to the talking voice, of the principles of production and support, as taught by the best teachers of the singing voice. The singer should study with the elocutionist or the teacher of the talking voice, in order to learn action, the elements of language and expression in the use of language. The speaker should study with the voice or singing teacher in order to learn the true principles

of voice production, of form, of adjustment, and especially of support.

The speaker as well as the singer must have power, he must make himself heard in some way or some how. With many speakers, as with many singers, wrong effort, and often undue effort, is resorted to; power misapplied; of course the voice, sooner or later, suffers in consequence. It is strange that we hear so few vibrant, beautifully toned speaking and singing voices. It is not strange, however; that many public speakers suffer with weak or injured throats, when we note the forced, unnatural manner in which they use their voices. A beautiful tone of voice means right conditions; it means health, durability, power. Ugliness means wrong conditions; it means weakness, and often decay. The right training and use of the speaking voice is as definite and positive as that of the singing voice; this is especially true with regard to those important points which the speaker usually lacks, proper adjustment and support, or true conditions at the organ of sound. Right support can be acquired and applied in the use of the speaking voice in much less time than in the use of the singing voice; it does not require the development of so much strength and sustained power.

"The highest aim, as well as the greatest ex-

cellence, of speaking or singing artists is to be able to do the most difficult or the simplest things with the least apparent effort; voice, face, body and limbs a unit, an unaffected harmony of expression." This depends upon a uniform development and mastery of all the powers. The man who understands the elements of the language, the language of action and of expression, knows much. He cannot, however, expect or hope to succeed, he cannot be considered an artist so long as he knows little or nothing of the true conditions of tone production, of tone support, the fundamental principles of correct voice use.

The right development and use of the speaking or of the singing voice depends upon the study and mastery of all the natural movements, the natural powers of the voice. The speaker must understand and control the motive power and resisting force in order to secure true conditions, true resistance at the organ of sound. This is the only way in which it is possible to overcome all local throat effort or strain ; the only way in which it is possible to disassociate muscular from vocal effort ; the only way in which it is possible to relieve and strengthen tired, worn, overstrained throats and voices. The speaking voice depends upon the same

powers of re-inforcement as the singing voice, and they must be developed and controlled upon the same general principles. It depends upon the re-inforcement of the muscles of the body, of the inflation of the resonance cavities, and of the influence of mind and soul. The same principles of tone color apply equally to both. Equal and sustained vowel form and the ability to maintain true conditions in passing from one vowel or word to another is as important in the speaking as in the singing voice.

The speaker should first study the principles of applied deep breathing ; the principles of true support which are the result of a right control of the motive power and resisting force. Upon this control, this balancing of the forces, depends all else. The speaker as well as the singer must know how to control the exit of the breath, how to support the voice. In this way, and in this way only, is it possible to "free the vocal channel," to relieve the throat of all effort and strain, and to develop the full power and beauty of the voice.

SPECIAL ANNOUNCEMENT.

In the year 1897 I wrote my book "Position and Action in Singing,"* in which work I gave for the first time some idea of the free, flexible bodily movements of my method. These movements are a practical study of physical, mental and emotional vitalization, whereby all true conditions of tone are developed automatically through vitalized energy instead of muscular effort, the old and prevailing way. These movements have solved the question of breathing—automatic breath control—the most important problem, for the singer, solved in the nineteenth century.

In the year 1902 I wrote "The Renaissance of the Vocal Art,"** which is a brief but definite and logically formulated method; a system or method with a definite technique, which in the vocal profession is surely something unique. The thoughtful reader will discover that my method is the result of an evolution, is the outgrowth of many years of practical experience; that while I have not changed one iota from the principles laid down in this work, "Vocal Reinforcement," yet I have changed very materially in the devices used to study and develop them. The true principles of voice development are based upon science and are as eternal as the hills. I have simply found through the development of the flexible movements of my system a quicker and better way; a way to train the voice naturally and automatically through vitalized energy instead of artificially and locally through conscious muscular effort.

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* Edgar S. Werner, Publisher.
** Boston Music Co. (G. Schirmer, Jr.), Publisher.

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Vocal reinforcement

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